JVC

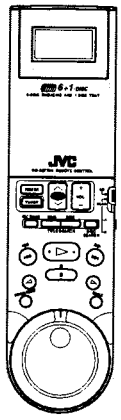
SERVICE MANUAL

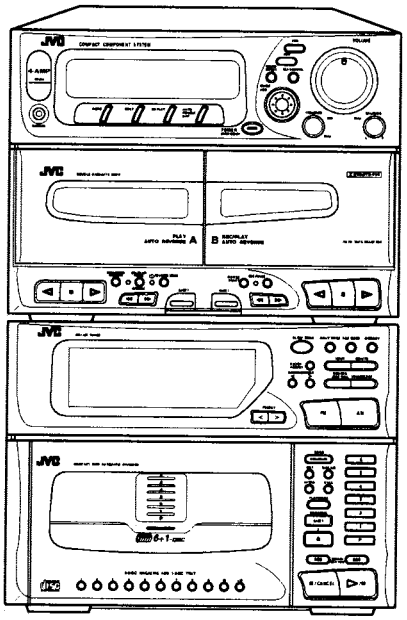
COMPACT COMPONENT SYSTEM

CA-C770/C990S

Pick up	OPTIMA-6
CD signal processor	MN662720RB

Area Suffix
C ..... Canada
J ..... the U.S.A.





COMPACT disc DIGITAL AUDIO

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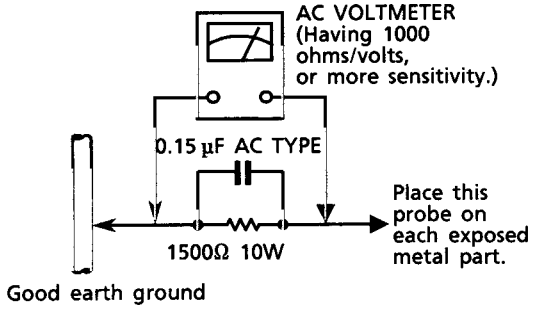
No. 20516
Mar. 1995

Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute repalcement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, contorl shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10 W resistor paralleled by a 0.15 µF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor.
     Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. **DANGER** : Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION** : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.
4. **CAUTION** : The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. **CAUTION** : If safety switches malfunction, the laser is able to function.
6. **CAUTION** : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

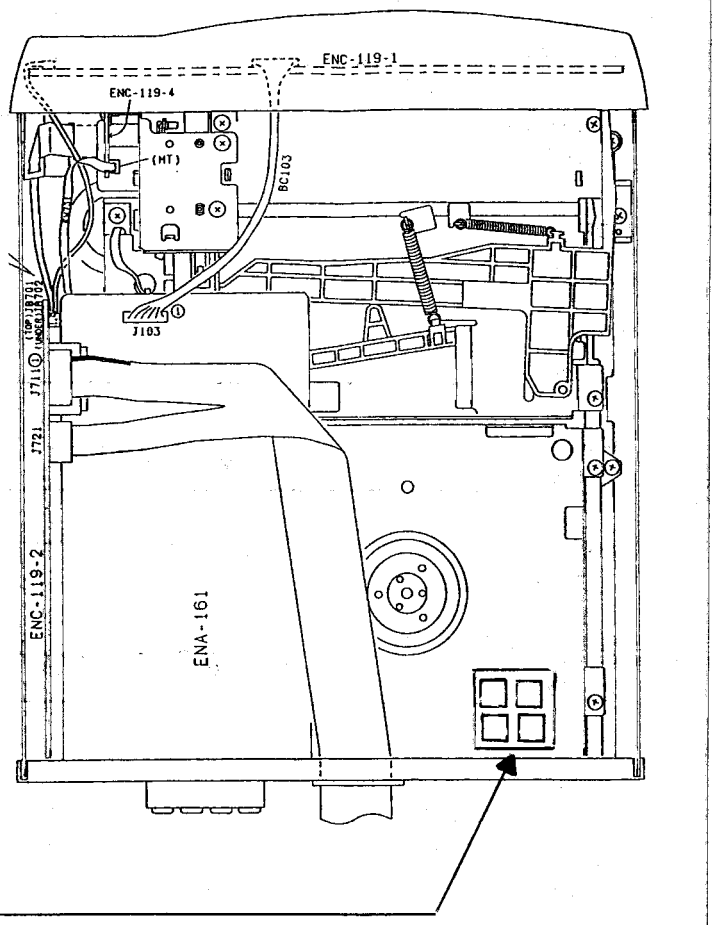
VARNING : Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

ADVARSEL : Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning, når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS



WARNING LABEL

(Except for the U. S. A.)

DANGER: invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)	VARNING: Osynling laserstråling när denna del å öppnad och spärren är urkoppled. Betrakta ej stålen. (s)
ADVARSEL: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude at funktion. Undgåudsættelse for stråling. (d)	VARO: Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)

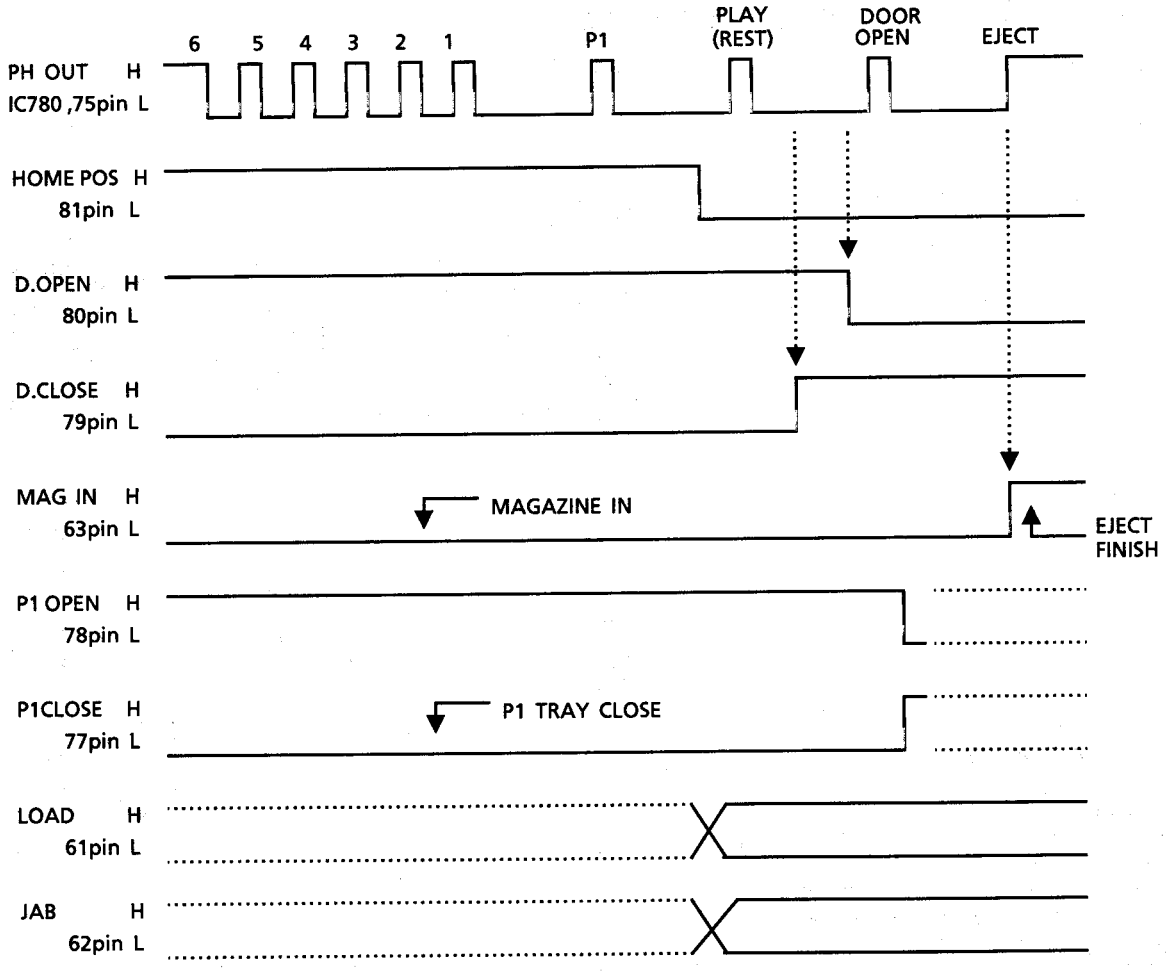
CHANGER MECH. (ELM-C600) Technical Explanation

ELM-C600 has been simplified as keeping functions which current changer mech.s have so that every units can be easily assembled.
The followings show its operational specifications.

1. Basic operation

① Execute JAB(UNLOAD) after turning the power on.
② The elevator should be at PLAY(rest) position when P1 tray is opened or closed.
③ The elevator should be at PLAY(rest) position when magazine is ejected.
④ The tray should be returned to magazine when the tray is loaded from the magazine.
⑤ The Plus-1 tray is opned after returning a disc if the P1 OPEN button is processed while the tray is being loaded.
⑥ Photo interrupter only detects lift cam position (includes PLAY position).
⑦ For "HOME POS'SW", signal is read in case of retrying and mech. initializing.
⑧ Signal is read twice every 5 msec. to judge switch's on and off.
⑨ It takes 50 msec. after finishing one operation to start next one (switching motor rotation).
⑩ The door is closed once and opned again if a disc on the P-1 tray is reproduced without taking a magazine out though it is ejected.

(1) Timing for each switches



····· : Range which H.Motor can rotate.
(That is, the range which magazine can be loaded or unloaded or Plus-1 tray can be opned or closed.)

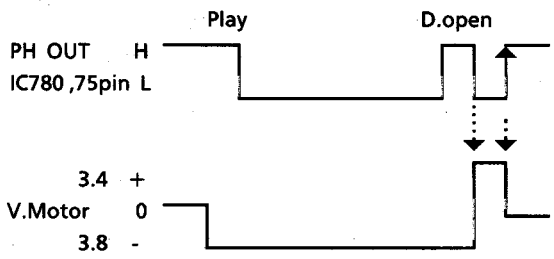
[NOTE] Door OPEN/CLOSE switch may sometimes follow the above chart because it is half linked. (Door is opened manually and the switch is linked to the door.)

(2) Returning a disc in power failure

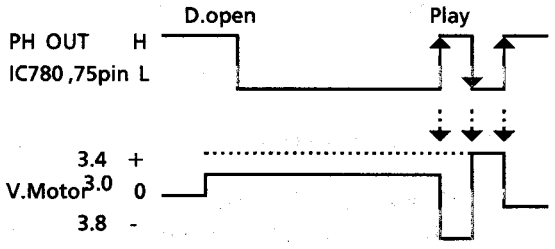
EEPROM memorizes step where the tray is pulled out it will be returned to its original step when power is supplied again.

2. Moving lift cam
   1) Signal of photo interrupter (PH OUT) is read twice every 5 msec..
   2) Elevator is once lowered and start to rise to select a tray.
   3) When the lift cam is moved, "PH OUT" is not detected during 50msec. which are set for masking.
      (The lift cam should stop within limited slit. The above masking prevent miscounting caused by the lift cam passing the limit.)
   4) P1 tray is closed before changing elevator height when "HOME POS" switch is on.
   5) Voltage is reduced only when the door is closed.

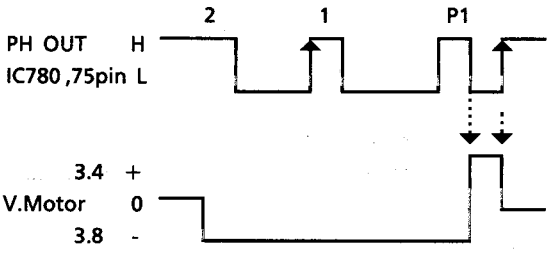
① Door open



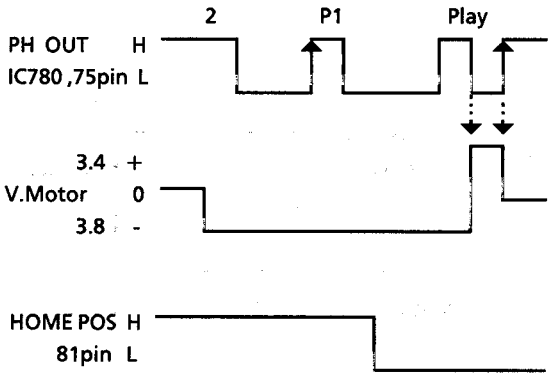
② Door close



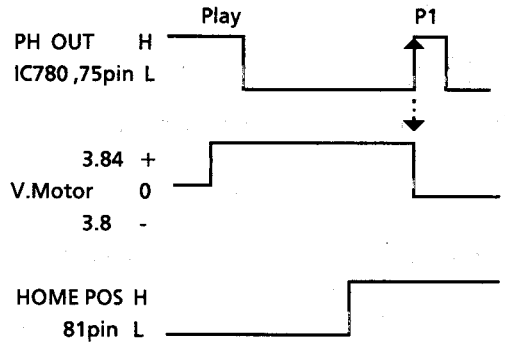
③ Elevator Down(DISC 2→P1)



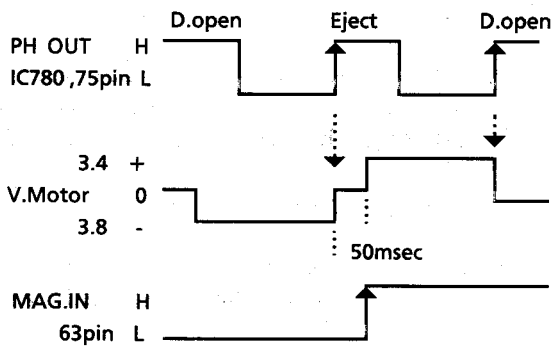
④ Elevator Down(DISC 2→P1)



⑤ Elevator Up(PLAY→P1)

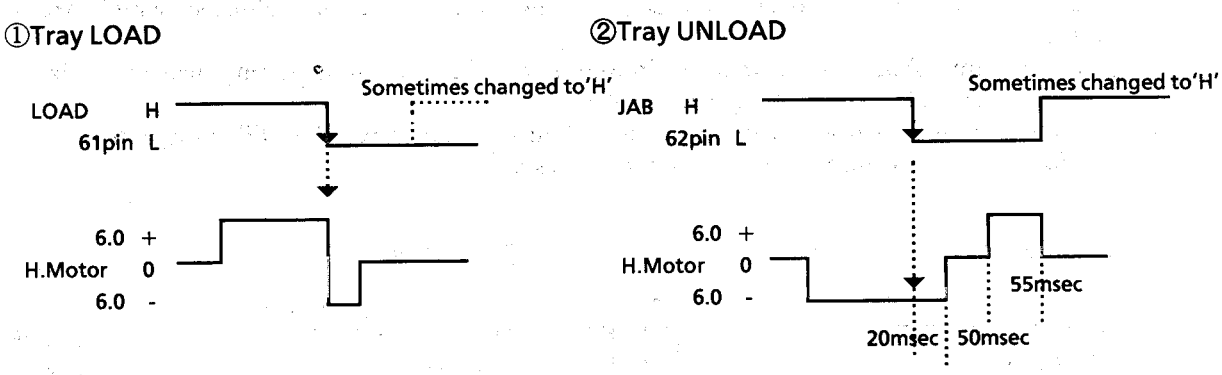


⑥ Eject



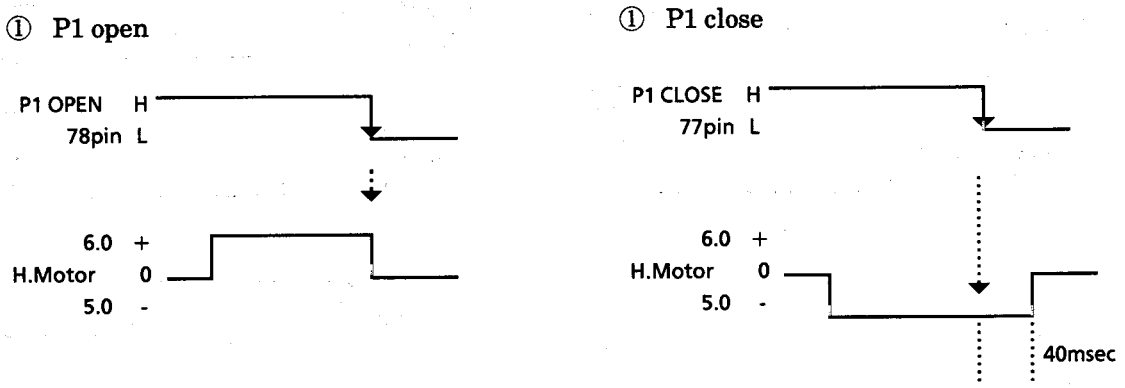
3. Tray LOAD/UNLOAD

1) The motor is rotated reversely for 20 msec. after LOAD switch is turned on.
2) The motor is rotated for 20 msec. in loading direction when "HOME SW" switch is off and "LOAD" switch is on after turning the power on.
3) JAB switch may sometimes be turned off after the operation.
4) LOAD switch may sometimes be turned off when the elevator is up to return a tray.



4. P-1 Tray OPEN/CLOSE

1) Closing the P-1 tray decrease voltage.
2) The tray starts the opening operation when 5 sec. timeout is finished after closing the tray.
3) The motor keeps its situation for 40 msec. after detecting P1 CLOSE switch on after closing the tray.



5. Magazine eject

Magazine is ejected slower than the cam's movement. 'MAG. IN' switch is turned off a certain period later after the cam is moved to "EJECT" position.
For retrying, the cam is returned to DOOR OPEN position and starts ejecting.

6. Door OPEN/CLOSE

1) The door is opened before the operation of opening P-1 tray or ejecting magazine.
2) The door can be closed manually while it is being opened.

7. Mech. reset

The followings show modes for each witches while the mech. is reset (mech. initialization).

SW Name	Symble	SW Mode	IC780 Pin No	Out put (IC780)
P1 OPEN/CLOSE	S005	CLOSE side	77pin	L
LOAD/JAB	S003	NOT SELECTED	61/62pin	---
D.OPEN/CLOSE	S731	CLOSE側	79pin	L
HOME POS	S002	ON	81pin	L
PHOTO SENSER	PH001	ON	75pin	L

8. Retrying operation at time out.

Retrying operation starts after timeout processing if operation time exceeds previously set time due to abnormality during its operation.

1) TRAY LOAD/UNLOAD

① LOADING → TIME OUT (10sec) → UN LOAD(JAB OPERATION) → RESET

TIME OUT → STOP

② UNLOADING→TIME OUT (10sec)→LOAD→Elev.Down(Checking H.posSW)→Elev.UP→UNLOAD→RESET

STOP ← TIME OUT

2) ELEVATOR UP/DOWN

① UP OPERATION→ TIME OUT (10sec) → Elev.Down(Checking H.posSW)→ Elev.UP →RESET

STOP ← TIME OUT

② DOWN OPERATION→TIME OUT (10sec)→STOP

3) P1 OPEN/CLOSE

① OPEN OPERATION → TIME OUT (10sec) → STOP(Standby for next operation)

② CLOSE OPERATION → TIME OUT (5sec) → P1 OPEN → STOP(Standby for next operation)

TIME OUT → STOP

4) DOOR OPEN/CLOSE

① OPEN OPERATION → TIME OUT (10sec) → STOP

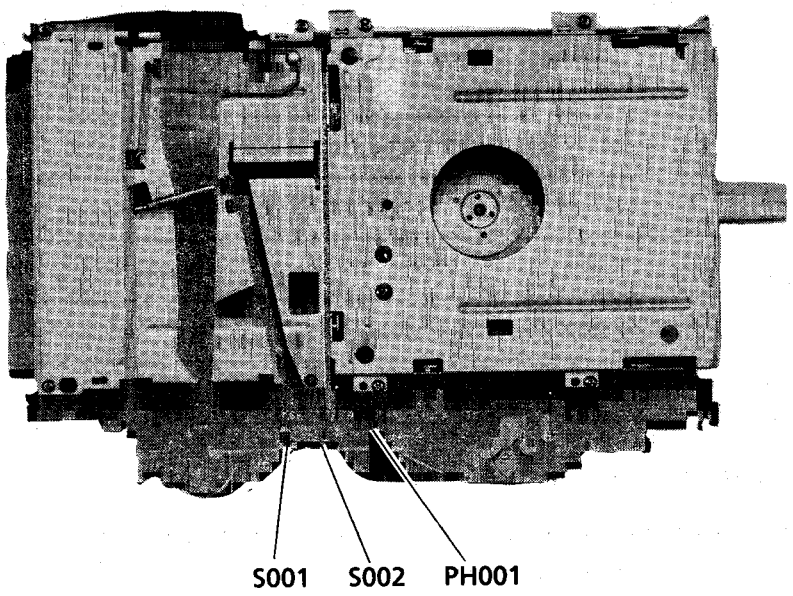
② CLOSE OPERATION → TIME OUT (5sec) → a:Play operation is prior.

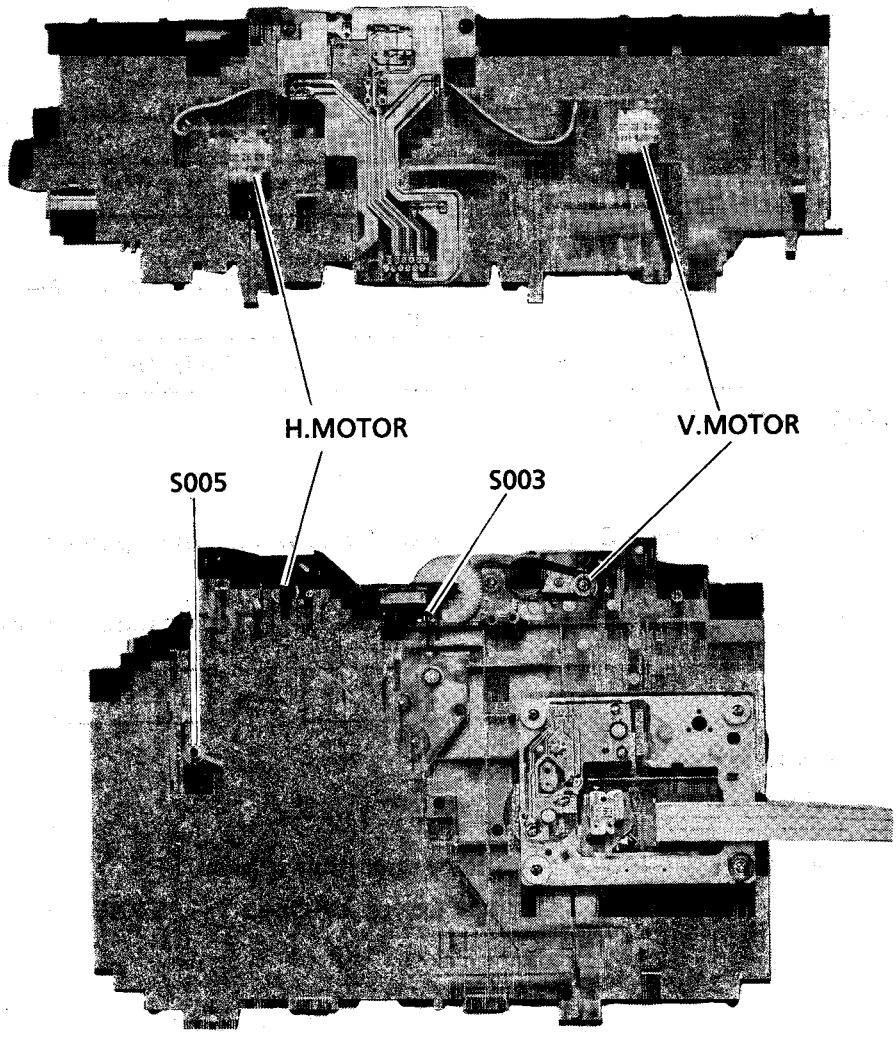
b:a Exsept for Open → STOP(Play operation is prior.)

5) EJECT

WITHOUT RETRAY

■ Position of switch and motor





English

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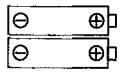
Getting Started

English

Check to be sure you have all of the following things, which are supplied with the System.

AM Loop Antenna

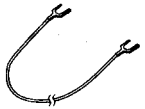
Remote Control

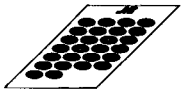

Batteries

Magazine

FM Feeder Antenna

FM Antenna Adaptor


External Wire

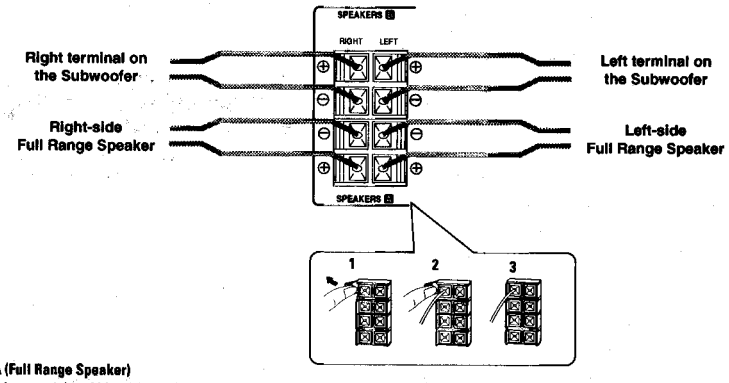

Sheet of Magazine Seals

If any are missing, contact your dealer immediately.

Connecting the Speakers *(Please refer to instructions for speakers as well when you connect speakers.)*

This Unit has two speaker terminals. The SPEAKERS A terminal connects to the Full Range Speakers, and the SPEAKERS B terminal connects to the Subwoofer to emphasize low sound frequencies.

For each speaker connect one end of the speaker wire to the speaker terminals on the back of the amplifier, and one end to the speaker.
1. Press the catch and open the terminal as shown in the illustration.
2. Insert the end of the speaker wire as shown (be sure to remove the insulation at the end of each wire first).
3. Take your finger off the catch to close the terminal.



SPEAKERS A (Full Range Speaker)
Connect the gray (+) and blue (–) terminals of the right-side Full Range Speaker to the lower gray (+) and blue (–) terminals marked RIGHT on the amplifier.
Connect the gray (+) and blue (–) terminals of the left-side Full Range Speaker to the lower gray (+) and blue (–) terminals marked LEFT on the amplifier.

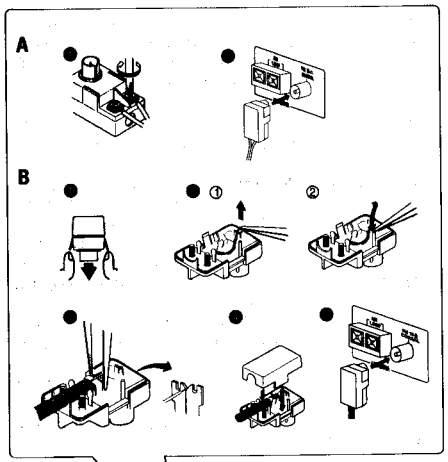
SPEAKERS B (Subwoofer)
Connect the red (+) and black (–) terminals on the Subwoofer to the upper red (+) and black (–) terminals marked RIGHT on the amplifier.
Connect the red (+) and black (–) terminals on the Subwoofer to the upper red (+) and black (–) terminals marked LEFT on the amplifier.

❑ Connect the terminals matching the polarity — the (+) speaker terminal goes with the (+) amplifier terminal and the (–) speaker terminal goes with the (–) amplifier terminal.
By matching the color of the speaker wire to the color of the terminal, you can easily match the polarity.

IMPORTANT: Use only speakers within the impedance range written on the Unit's back panel.
CAUTION: If a TV is installed near speakers, the TV may display irregular colors. In this case, set the speakers away from the TV.

Connecting the FM and AM Antennas

FM Antenna Connections



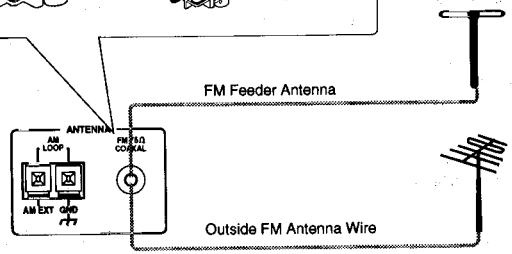
A. Using the Supplied Feeder Antenna

- Attach the feeder antenna to the FM connector as shown in the figure.
- Connect the FM connector to the FM 75-ohm COAXIAL terminal.

B. Using an FM 75-ohm antenna Cable (Not Supplied)

- Open the claws at both sides and remove the cover.
- Move the conductor wire from ① to ② using tweezers or a similar instrument (only when using coaxial cable).
- Fix the coaxial cable and its core.
- Put on the cover.
- Connect the FM connector on the FM 75-ohm COAXIAL terminal.

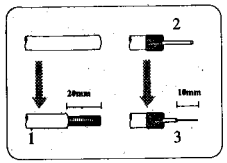
Note: Make sure the antenna conductors do not touch any other terminals, connecting cords or power cord in the system. This could cause poor reception.



Unfold the loops of the supplied FM feeder antenna and extend them as shown. Install them in the position and location which gives you the best FM reception.

If reception is poor, connect the outside antenna.

Before attaching a 75 ohm coaxial lead (the kind with a round wire going to an outside antenna), disconnect the supplied FM feeder antenna.

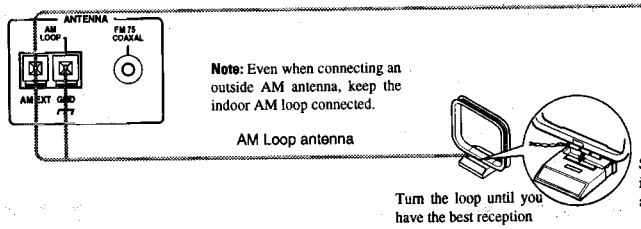


How to Strip the 75-ohm Coaxial Cable

1. Strip back the outside covering of the 75 ohm coaxial cable to expose the braided metallic mesh.
2. Pull the mesh back over the cable as shown.
3. Strip the insulation about 10 mm back from the central wire.
4. Attach to the supplied antenna adaptor, as shown in the diagram above.

CAUTION: To avoid noise, keep antennas away from metallic parts of the System, connecting cords and the AC power cord.

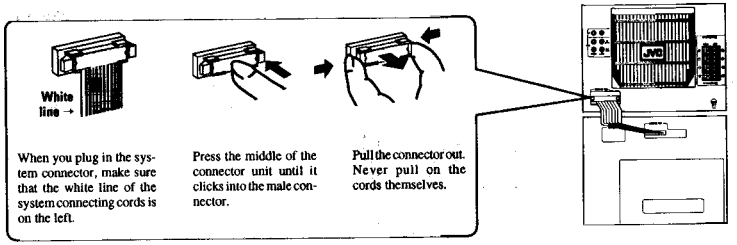
AM Antenna Connections


AM Antenna Wire
If receptions is poor, connect the outside antenna.
ANTENNA
AM LOOP
FM 75 COAXIAL
AM EXT GND
Note: Even when connecting an outside AM antenna, keep the indoor AM loop connected.
AM Loop antenna
Turn the loop until you have the best reception
Snap the tabs on the loop into the slots of the base to attach the AM loop.

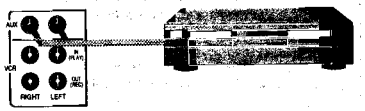
Connecting the System Control Cords and Connecting Auxiliary Equipment

Connect the components exactly as illustrated below.

CAUTION: Make all connections before plugging the Unit into an AC power outlet.

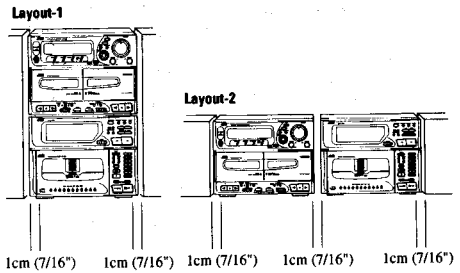

White line →
When you plug in the system connector, make sure that the white line of the system connecting cords is on the left.
Press the middle of the connector unit until it clicks into the male connector.
Pull the connector out. Never pull on the cords themselves.

Video disc player or other equipment
To listen to these sources, press the AUX button.



VCR, etc.
To listen to these sources, press the VCR button.

Laying Out the System

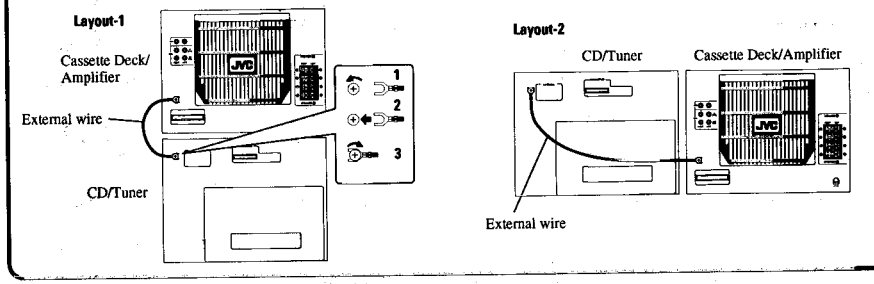


There are two ways to lay out the system, as shown above:

- Leave a space of at least 1 cm on both sides of the amplifier and at least 10 cm at the back, for ventilation.
- If the system does not work or needs repairing, please take all the components with you to the nearest agent.

Connecting the External Wire

CAUTION: To prevent malfunction, connect the supplied wire as illustrated below.

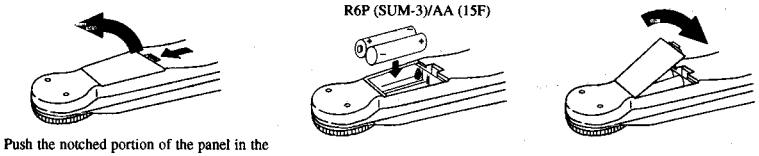


Now you can plug the AC power cord into the wall outlet, and the System is at your command!

English

How to Put Batteries in the Remote Control

Match the polarity (+ and –) on the batteries with the + and – markings in the battery compartment.

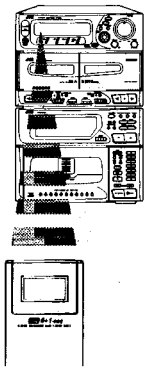


Push the notched portion of the panel in the direction indicated above, and lift.

CAUTION: Observe Proper Handling of Batteries.
To avoid battery leakage or explosion:

- Remove batteries when the Remote Control will not be used for a long time.
- When you need to replace the batteries, replace both batteries at the same time with new ones.
- Don't use an old battery with a new one.
- Don't use different types of batteries together.

How to use the Remote Control

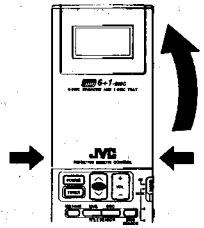


The Remote Control makes it easy to use many of the functions of the System from a distance of up to 23 feet away. You do need to point the remote sensor at the System front panel.

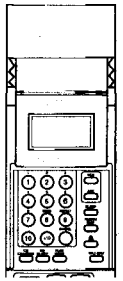
- Most of the buttons on the Remote Control do just what the ones on the System do.

How to open the front panel

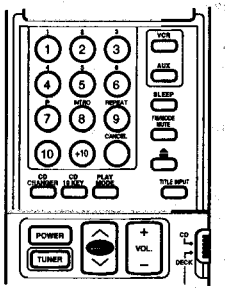
The front panel of the Remote Control includes the CD CHANGER, CD 10KEY, PLAYMODE, VCR, AUX, SLEEP, FM MODE/MUTE, ⏏, and TITLE INPUT buttons, and can be accessed as shown below.



Grasp and lift from the points on the panel indicated above.



Push back lightly and the panel will lock in an open position.
Note: The panel may break if you press too hard.



How to use the numeric key pad

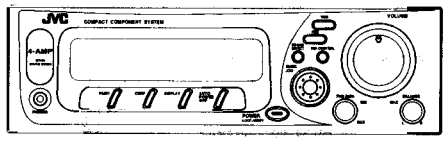
The numeric key pad is used to specify a CD, a CD track or the number you have assigned to a preset radio station. To enter a number using the numeric key pad, follow these steps:

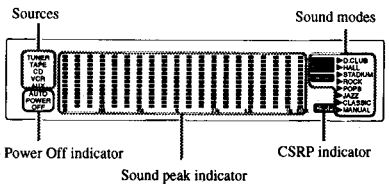
- Before using the numeric key pad, check to see whether the numeric key pad is functioning to operate the CD player or tuner. This depends on which button on the Remote Control you have pressed before using the numeric key pad. For example, if you press the TUNER button before the numeric key pad, it can select a preset station. Pressing the CD CHANGER button enables you to select a CD and also to operate the INTRO and REPEAT buttons. If you press the CD 10KEY button, it can select a CD track.
- For numbers between 1 and 10, just press the button with the number you want.
- For numbers from 11 to 20, first press the +10 key, then the one digit of the number you want — to get 15, first press +10, then 5. For 20, press +10 and 10.
- For numbers from 21 to 30, press the +10 key twice; then press the one digit — to get 25, press +10 +10 and 5. For 30, +10 +10 and 10.
- For number from 31 to 40, press the +10 key three times, then the one digit of the number you want — to get 32, first press +10 +10 +10 and 2. For 40, press +10 +10 +10 and 10.

Using the Amplifier

English

Amp display





The Magic of COMPUPLAY

COMPUPLAY

COMPUPLAY is JVC's feature that lets you control the most used functions of the System with a single touch. One Touch Operation starts playing a CD, turns on the radio, plays a tape, etc. with a single press of the play button for that function. What One Touch Operation does for you is to turn the power on, then start the function you have specified. If the Unit is not ready, such as no CD or tape in place, the System still powers on so you can put in a CD or tape. How One Touch Operation works in each case is explained in the section dealing with that function.

Turning the Power On

Press the POWER button.

The displays come on and the red indicator on the POWER button light goes out.

- The System comes on ready to do whatever it was doing when the power was last shut off. If the last thing you were doing was listening to a tape in Deck B, you are now ready to listen to a tape again in Deck B, or you can change to another source.
- If you were listening to the radio last, the radio comes on playing the station it was last set to.

Turning the Power Off

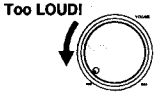
Press the POWER button again.

The red indicator on the POWER button light up and the displays blank, except for the clock display.

- A little power (14 watts) is always consumed even though power is turned off (this is called standby mode).
- To switch off the System completely, unplug the AC power cord from the AC outlet. When you unplug the AC power cord, the clock will reset to 12:00 AM right away, while the preset tuner stations will be erased after a few days.

Adjusting the Volume controls

Caution: Too LOUD!



Volume Control

Turn the VOLUME control to adjust the volume level of the speakers or headphones.

CAUTION: Always set the VOLUME control to MIN before turning on a connected source such as a VCR or starting any of the other sound sources such as the radio, tape, CD player. Otherwise, if the VOLUME control is set too loud the sudden blast of sound can permanently damage your hearing and/or ruin your speakers.

Balance

Turn the BALANCE control to adjust the left-and-right sound balance in the speakers or headphones.

Twin Bass

Turn the TWIN BASS control to reduce or increase (MAX) the output level of the Subwoofers. When set to the center, normal bass reinforcement is applied.

Listening with Headphones

A standard pair of headphones can be connected to the PHONES jack on the front panel. No sound can then be heard from the speakers. Be sure to turn down the volume before connecting or putting on headphones, as high volume can damage both the headphones and your hearing.

CA-C770/C990S

1-11

Sound Effect Modes

The Amplifier has some preset sound effects that give you control of the way your music sounds, so you can tailor it for your room and for the quality of the source. We can give you some idea of how each one affects the music, but the only way to really tell is to try them yourself.
You can use only one effect at a time, selecting from the LIVE SURROUND or S.E.A. effects. Feel free to experiment!

LIVE SURROUND effects:
- D. CLUB (Dance Club)
- HALL
- STADIUM

S.E.A. effects
- ROCK
- POPS
- JAZZ
- CLASSIC

LIVE SURROUND effects

There are 3 modes — **D. CLUB (Dance Club), HALL,** and **STADIUM** — in the pre-programmed LIVE SURROUND settings.

D. CLUB	Increases resonance and bass.
HALL	Adds depth and brilliance to the sound, like in a concert hall.
STADIUM	Adds clarity and spreads the sound, like in an outdoor stadium.

Preset S.E.A. (Sound Effect Amplifier) effects

There are 4 modes — **ROCK, POPS, JAZZ,** and **CLASSIC** — in the pre-programmed S.E.A. settings.

ROCK	Boosts low and high frequencies.
POPS	Good for vocal music.
JAZZ	Gives a feeling of a live atmosphere. Good for acoustic music.
CLASSIC	Set for wide and dynamic sound stereo systems.

To choose an effect, turn the MUSIC JOG.
If you select the Live Surround effects, "LIVE-S" appears on the amp display. If you select the S.E.A. effects, "SEA" appears on the amp display.

To cancel the effect, press the SOUND EFFECT button; the "LIVE-S" or "SEA" display goes off.

❑ When the "LIVE-S" or "SEA" display is off, press the SOUND EFFECT button, to turn Sound Effect on. To select a mode, turn the MUSIC JOG.

Sound Effect Demonstration

You may sometimes be unable to decide which sound effect to use for the music you are listening to. In this case, you can use a very helpful function — Sound Effect Demonstration.

To choose this function, press the DEMO button while playing music; the sound effect demonstration is performed for a few seconds in each mode in the following order.

D. CLUB → HALL → STADIUM → ROCK → POPS → JAZZ → CLASSIC → MANUAL

To cancel this function, press the DEMO button again, or turn the MUSIC JOG.

Controlling Sound with the S.E.A. Function

It is possible to manually program the S.E.A. pattern with the Live Surround effects and the S.E.A.-only pattern .

1. Turn the MUSIC JOG and select the sound effect mode you prefer.
   When creating a pattern with Live Surround effect, select a mode with "LIVE-S" displayed. When creating a pattern without Live Surround effect, select a mode with "SEA" displayed.
   Note: The Live Surround effect is set for a specific effect regardless of the mode you selected.
2. Press the SEA CONTROL button.
   ❑ "MANUAL" is selected and the frequency range of the low sound portions blinks.
3. While the indicator lights are blinking, turn the MUSIC JOG and increase or decrease the level.
   ❑ When the blinking is finished, press the SEA CONTROL button again, then turn the MUSIC JOG.
4. Press the SEA CONTROL button.
   ❑ The frequency range of the medium sound portions blinks.
5. While the indicator lights are blinking, turn the MUSIC JOG and increase or decrease the level.
   ❑ When the blinking is finished, press the SEA CONTROL button twice, then turn the MUSIC JOG.
6. Press the SEA CONTROL button.
   ❑ The frequency range of the high sound portions blinks.
7. While the indicator lights are blinking, turn the MUSIC JOG and increase or decrease the level.
   ❑ When the blinking is finished, press the SEA CONTROL button three times, then turn the MUSIC JOG.
8. The frequency range from low sounds to high sounds is indicated and the pattern that you created is programmed.

❑ To change the MANUAL pattern, repeat the procedure above.

To choose this effect, turn the MUSIC JOG and select "MANUAL".

Advantages of connecting optional equipment

Listening to Optional Equipment

By playing the sound from a VCR or Auxiliary equipment through the System, you can gain control over how the music or program sounds. Once the connected equipment is playing through the System, you can apply the sound effects, make recordings, or listen with the headphones.

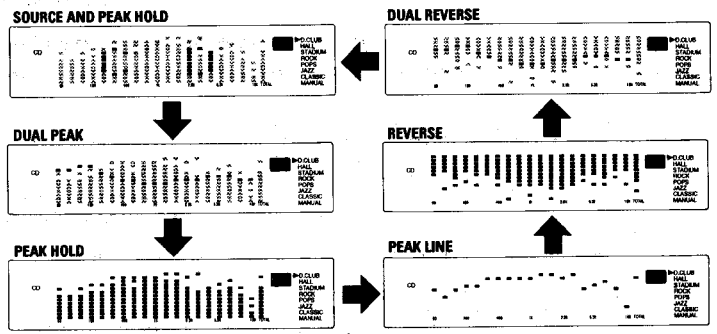
❑ First make sure that the optional equipment is properly connected to the system.

1. Set the VOLUME control to MIN.
2. Press the AUX button or the VCR button.
   The System automatically turns on. "AUX" or "VCR" lights up on the amp display.
3. Start playing the selected equipment.
4. Adjust the VOLUME control to the desired listening level.
5. Select a sound effect mode, if you wish.

To cancel the setting
Change the source by starting any one of the built-in sound sources, such as the radio or CD player.

Changing the Display

Six display modes (**SOURCE AND PEAK HOLD, DUAL PEAK, PEAK HOLD, DUAL REVERSE, REVERSE, PEAK LINE**) are available. Each time you press the DISPLAY button, the display mode will change in the following order:



Using the CSRP Feature

CSRP automatically remembers the last settings of source volume and sound effect modes choosen for each source. This memory function is set every time the power is turned off or the source is changed.
The following selections are stored:
- Volume level
- Sound effect modes
- Display modes

The choices which have been remembered and preset for on each source can be automatically called up at any subsequent playback.

Press the CSRP button.

❑ When sources are switched, the VOLUME level, sound effect mode, and display mode are automatically set.
❑ When turning the power off, the VOLUME control automatically turns toward MIN.
❑ When turning the power on again, the VOLUME control automatically turns up to the position set by the CSRP function.

English

Auto Power Off

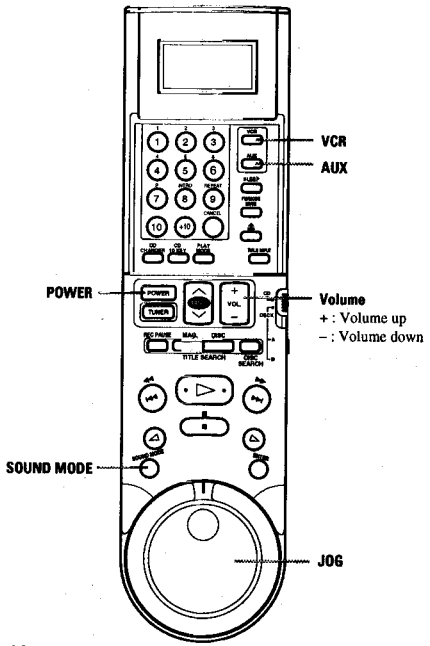
When playing either a tape or a CD, Auto Power Off will shut the Unit off when the tape or CD comes to the end. Although Auto Power Off is very useful for shutting off the System at night, you can also use it if you think you might forget to turn the Unit off when leaving the house or your room at other times of the day.

To use Auto Power Off:
Press the AUTO POWER OFF button so that the "AUTO POWER OFF" indicator lights up on the amp display.
To cancel Auto Power Off:
Press the AUTO POWER OFF button again so that the "AUTO POWER OFF" indicator disappears from the display.

Important information on using Auto Power Off

- ❑ The end of CD musical performance varies depending on the play mode of the CD player. If the Play Mode is "CONTINUE" or "RANDOM", when all tracks on the disc set in the CD player end, the power is automatically turned off. If the Play Mode is "PROGRAM", when the last track you programmed ends, the power is automatically turned off.
- ❑ Auto Power Off will still work even though you press the REPEAT button.
  Repeat Mode ("REPEAT" indicator lights up on the CD/Tuner display):
  After all tracks on the disc set in the CD player end, the power is automatically turned off.
  Repeat 1 Mode ("REPEAT 1" indicator lights up on the CD/Tuner display):
  After the current track ends, the power is automatically turned off.
- ❑ If you press the AUTO POWER OFF button while the tape is playing:
  - If Reverse Mode is off (the REVERSE MODE indicator is not lit), the Unit turns off when the current side finishes.
  - If Reverse Mode is on (the REVERSE MODE indicator light up), the Unit plays the current side, reverses and plays the other side, then shuts off.

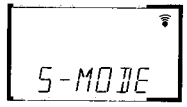
Operating the Amplifier by Remote Control



POWER, VCR, AUX buttons are operated in the same way as on the Unit itself.

Changing the Sound Effects mode

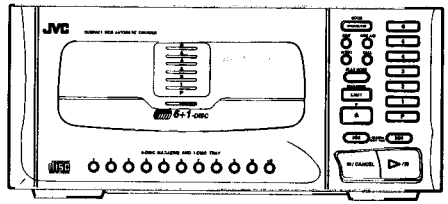
1. Press the SOUND MODE button.
   The button lights up red.
2. Turn JOG to change the Sound Effect mode. Turn JOG until "S-MODE" is indicated on the Remote Control display.



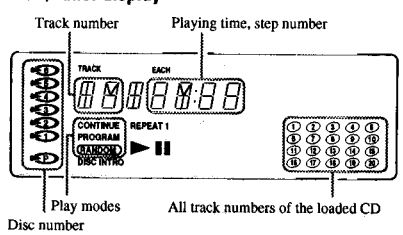
❑ If the SOUND MODE button is pressed again, the red light of the button turns off and JOG operations are cancelled.

Note: The red light of the SOUND MODE button automatically turns off after a certain amount of time passes without operating JOG.

Using the CD player



CD/Tuner display



Here are the basic things you need to know to play a CD and locate the different selections on it. Each selection is called a track, so when we are talking about locating a track, we are also talking about how you find a certain song or performance. This CD player is an automatic changer, which can play 6 discs in the supplied magazine and one on the ordinary single tray, called the PLUS 1 tray.

Basics of Using the CD Player

COMPU PLAY
Compact Disc Play

The quickest way to start a CD is with the One Touch Operation:

- ❑ Press the Disc buttons (1 to 6 and P).
  - If no magazine is inserted, the System turns on and the CD door opens.
- ❑ Press the ▷ /II button (or the ▷ button on the Remote Control) on the CD player.
  - If a CD is already loaded in the inserted magazine or on the PLUS 1 tray, the System automatically turns on and starts to play it, from Track 1.
  - If no CD is loaded, the System automatically turns on and the PLUS 1 tray slides out. This is the same as what happens if you press the P ▲ button instead of the ▷/II button.

How to use the CD player: basic to advanced

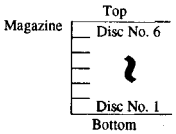
To Prepare Discs

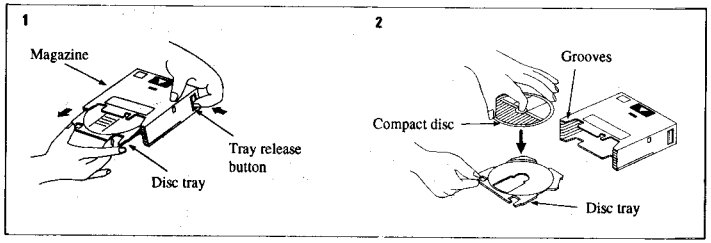
The discs are first loaded into the trays, which are then inserted into the magazine. The magazine is then put into the changer. You can also place a disc on the PLUS 1 tray.

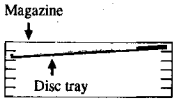
To install discs into the magazine

1. To remove the disc tray from the magazine, slide the disc tray out while holding down the tray release button.
2. Place a disc on the disc tray with its label side up.
3. Line up the disc tray with the grooves in the magazine and push the disc tray right in.
   - ❑ It is not necessary to press the tray release button when inserting the disc tray.

In the magazine, the disc numbers are as follows:







Do not insert disc trays on an angle.

- ❑ When inserting or removing a disc tray:
  - Never bend the disc tray or force it into the magazine. A disc tray inserted on an anble may cause a malfunction.
  - The magazine should be held horizontally.
- ❑ The openings in the disc trays are for passage of the laser signal. These openings leave a part of the shiny surface of the disc exposed. Do not touch this shiny surface.
- ❑ It is impossible to play a disc if it is in upside-down.
- ❑ Never place a disc directly in the magazine without using the disc tray.

To insert the magazine

1. Press the DOOR OPEN/CLOSE button on the Unit to open the door.
2. Insert the magazine, with disc loaded, into the changer and push it in gently until it clicks into place.
   - ❑ The ▲ mark on the magazine must be facing up.
3. Press the DOOR OPEN/CLOSE button again to close the door.

To remove the magazine, press the MAGAZINE EJECT button.

CAUTION: The CD player may be damaged if the magazine is pushed in with too much force.

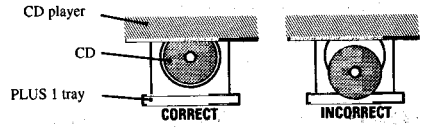
To load a CD on the PLUS 1 tray

1. Press the P ▲ button.
   The door opens and the PLUS 1 tray slides out automatically.
2. Put a CD, with its label side up, into the tray.
3. To close the tray, press the P ▲ button or the DOOR OPEN/CLOSE button.
   - ❑ It is not necessary to press the P ▲ button to close the tray. If you press the ▷/II button to start play, the tray closes automatically.

Notes:

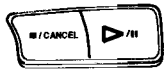
- Remove any objects in front of the door when opening it.
- Do not use your hand to open or close the door.
- When you close the PLUS 1 tray, make sure the magazine is inserted completely.
- Do not operate the Unit while the door is opening or closing.
- When the door is open, do not press the disc button (1 to 6 and P) or change the source.
- When inserting or removing the magazine, do not operate a CD on the PLUS 1 tray. Likewise, when placing a CD on or removing a CD from the PLUS 1 tray, do not operate a CD in the magazine.

ATTENTION: *Take care to place the CD at the center of the PLUS 1 tray, when you play a CD with the tray. The PLUS 1 tray will malfunction if you place the CD in the incorrect position.*



To remove a CD from the PLUS 1 tray, press the P ▲ button again.

To Play a CD



1. Load the disc(s).
2. Press the ▷/II button (or the ▷ button on the Remote Control).
   The CD player plays the first track on the disc in the PLUS 1 tray. (The current disc number is indicated by the arrow on the display.) If no disc is loaded on the PLUS 1 tray, the Unit automatically skips the empty tray, and finds and plays the discs you have put in the magazine, from bottom (Disc 1) to top (Disc 6). The indicators for any skipped trays go out. The Unit memorizes these empty trays and will keep skipping them, until the magazine is ejected.

To stop the CD, press the ■/CANCEL button (or the ■ button on the Remote Control).
To pause, press the ▷/II button while the CD is playing.

To Change Discs While Playing

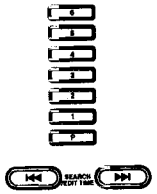
To change discs in the magazine while playing a CD in the PLUS 1 tray.

1. Press the MAGAZINE EJECT button.
   The door opens and the magazine comes out.
2. Change the discs in the magazine.
3. Push the magazine back in.
4. Press the DOOR OPEN/CLOSE button to close the door.

To change the disc in the PLUS 1 tray while playing a CD in the magazine.

1. Press the P ▲ button.
   The door opens and the PLUS 1 tray slides out.
2. Change the disc.
3. Press the P ▲ button again or the DOOR OPEN/CLOSE button.
   The tray slides shut.
   - ❑ While playing a CD, keep the door closed except when changing discs.

How to find a track



To Select the Disc, Track or Passage within a Track

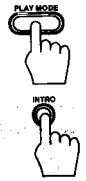
By using the Unit

1. If the disc with the track you want is not playing, enter the number of disc you want, using the disc buttons (1 to 6 and P) on the far right of the CD player.
   - ❑ Example: for the third disc (from the bottom) in the magazine, press 3.
     For the disc on the PLUS 1 tray, press P.
2. Enter the number of the track you want, using the track buttons (1 to 10 and +10) on the lowest portion of the CD player.
   The selected track starts playing.
   - ❑ Example: for track 5, press 5. For track 15, press +10 then 5. For track 20, press +10 then 10.
   - ❑ In this step, you can also use the SEARCH/EDIT TIME I◄◄ or ►►I button.
     - Each time you briefly press and release the SEARCH/EDIT TIME I◄◄ or ►►I button, the track changes by one.
     - Holding down the SEARCH/EDIT TIME I◄◄ or ►►I button will fast forward or fast reverse the CD so you can quickly find a particular passage in the selection you are listening to.

By using the Remote Control

1. If the disc with the track you want is not playing, first press the CD CHANGER button, then enter the number of the disc you want, using the numeric keys (1 to 6 and P).
   - ❑ Example: for the third disc (from the bottom) in the magazine, press 3.
     For the disc on the PLUS1 tray, press P.
2. Press the CD 10KEY button.
3. Enter the number of the track you want using the numeric keys.
   The selected track starts playing.
   - ❑ Example: for track 5, press 5. For track 15, press +10 then 5. For track 20, press +10, then 10.
   - ❑ You can also use the I◄◄ or ►►I button to change tracks. However, you cannot fast forward or reverse forward to locate a particular passage using the Remote Control.

Searching the contents of CDs



Intro Scan

You can use two types of Intro Scan functions (Disc Intro Scan and Track Intro Scan) to search for a desired disc or track.

1. Make sure that the CD is not playing and that "CONTINUE" appears on the CD/Tuner display.
   If not, stop the CD player and press the PLAY MODE button until the CD/Tuner display reads "CONTINUE".
2. Press the INTRO button.
   (When using the Remote Control, press the CD CHANGER button, then press the INTRO button.)
   Each time you press the button, the Intro Scan mode changes and lights up on the CD/Tuner display in the following sequence:

   DISC INTRO ⟶ **INTRO** ⟶ No indication ⟶ (back to DISC INTRO)

3. Press the ▷/II button (or the ▷ button on the Remote Control)
   Disc Intro Scan (when "DISC INTRO" lights up):
   Plays the beginning of the first track of each CD for about 15 seconds starting with the disc on the PLUS 1 tray and then Disc 1 through Disc 6 in the magazine.
   Track Intro Scan (when only "INTRO" lights up):
   Plays the beginning of each track of each CD for about 15 seconds starting with the disc on the PLUS 1 tray and then Disc 1 through Disc 6 in the magazine.
4. Press the SEARCH/EDIT TIME I◄◄ button (or the I◄◄ button on the Remote Control) when the desired track is reached.
   Intro scan is canceled and normal playback starts from the selected track.
   - ❑ If you press the following buttons instead of the SEARCH/EDIT TIME I◄◄ button (or the I◄◄ button on the Remote Control), Intro Scan is also canceled, and:
     - If you press SEARCH/EDIT TIME ►►I (or the ►►I button on the Remote Control) Continuous Play starts from the next track.
     - Disc buttons (1 to 6 and P): Continuous Play start from the first track of the selected disc.
     - Track buttons (1 to 10 and +10): Continuous Play starts from the selected track of the current disc.

To stop playing, press the ■/CANCEL button (or the ■ button on the Remote Control).
To exit Intro Scan mode, press the INTRO button so that neither "DISC INTRO" nor "INTRO" appears on the display.

With programming, you can play back tracks in any order

Programming the Playing Order of the Tracks

In addition to the high quality sound which makes the CD such a good way to listen to music, you can change the order in which the tracks play.

Random Play

The tracks will play in no special order when you use this mode.
Before starting a CD, press the PLAY MODE button repeatedly until "RANDOM" lights up on the CD/Tuner display. When all of the tracks have been played, the CD stops.

To stop playing, press the ■/CANCEL button (or the ■ button on the Remote Control).
To exit random mode, press the PLAY MODE button until "RANDOM" no longer appears on the CD/Tuner display (the Unit must be in stop mode).

Program Play

You can change the order in which the discs and tracks play, and select only the discs and tracks you want from among those loaded in the magazine and the PLUS 1 tray.

- ❑ You can program from either the Unit or the Remote Control, or a combination of both.
- ❑ You can program up to 32 steps in any desired order from among the discs in the player. Since a step can be either a single track or an entire disc with many tracks, the total number of selections which will actually play can be much larger than 32.

How to program

Programming Procedure:
You can only make or change a program when the CD player is stopped.

1. Press the PLAY MODE button repeatedly until "PROGRAM" appears on the CD/Tuner display.
2. Select a disc with the disc buttons (1 to 6 and P). As soon as a disc is selected, it is memorized and "AL" lights up on the CD/Tuner display. If you want all the tracks on that disc to play as part of the program, skip step 3.
3. To select individual tracks from the selected disc (its number is indicated by the arrow on the display) enter each track number using either track buttons on the Unit or by pressing the CD 10KEY button and using the numeric key pad on the Remote Control.
   - ❑ Example: for track 5 press 5. For track 15, press +10 then 5. For track 20, press +10 and 10.
4. Repeat steps 2 - 3 until you have entered all the tracks you want to program.
5. Press the ▷/II button (or the ▷ on the Remote Control).
   The Unit plays the tracks in the order you have programmed them.
   - ❑ You can skip to a particular program step by pressing the SEARCH/EDIT TIME ⏮ or ⏭ button during program play.
   - ❑ To play the programmed tracks over and over, press the REPEAT button on the Remote Control. "REPEAT" lights up on the display.

To stop playing, press the ■/CANCEL (or the ■ button on the Remote Control) once.
To delete the program and exit program mode, press the ■/CANCEL button on the Unit (or CANCEL button on the Remote Control) repeatedly until all the program steps are deleted, and then press the PLAY MODE button until "CONTINUE" appears on the display.

Programming Hints

A few Hints to Make Programming Easier

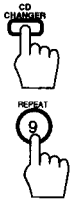
To check the program contents (the Unit must be in stop mode)

- ❑ Each time you press the CALL button on the Unit, the program contents are shown on the CD/Tuner display in the programmed order.

To change the program contents

- ❑ Press the CALL button until the CD/Tuner display shows the program step to correct. Enter the new disc number and/or track number, which will replace the one originally showing.
- ❑ To delete a program step, press CALL button until the CD/Tuner display shows the program step to delete, then press the ■/CANCEL button (or the CANCEL button on the Remote Control).
- ❑ You can use both of these ways to change program steps during programming as well as later.

Repeat a selection or the CDs



Repeating a Selection or the Discs

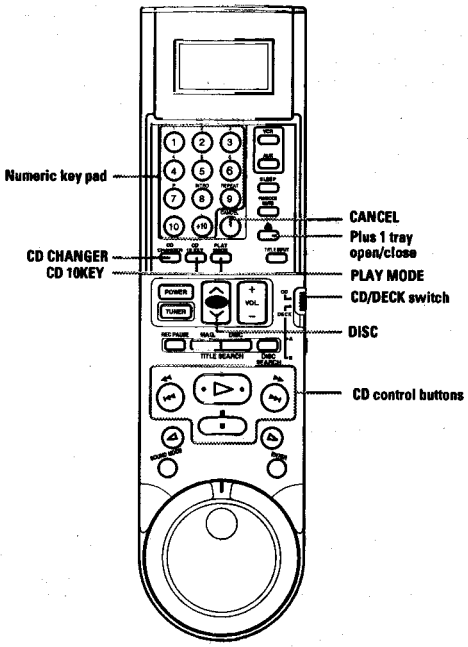
You can have all the discs, the program or the individual selection currently playing repeat as many times as you like by pressing the REPEAT button on the Remote Control.

1. Press the CD CHANGER button on the Remote Control.
2. Press the REPEAT button.
   Each time you press the REPEAT button, it cycles from function-off, which turns "REPEAT" out on the CD/Tuner display, to "REPEAT" which will repeat all the tracks in order or according to the program you have set, and then to "REPEAT 1" which will repeat the currently playing track.

To exit repeat mode, press the REPEAT button so that neither "REPEAT" or "REPEAT 1" appears on the display.

- ❑ Press the REPEAT button before or during random play to instruct the Unit to continue with a different random track selection after the last selection of the last disc is played.

Operating the CD player by Remote Control



The CD/DECK switch should be set on CD.

PLAY MODE, ⏏, and CD control buttons operate in the same way as on the Unit itself (fast forward and fast reverse cannot be operated by the Remote Control).

To play a CD

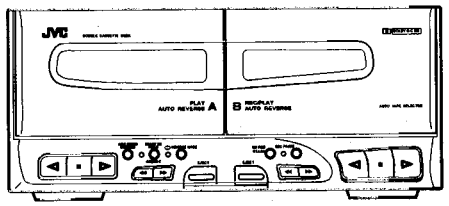
Use the numeric key pad to play the CD
Set the disc no. or the disc no. and track no. (refer to page 6).
The selected disc no. is indicated on the Remote Control display and begins to play.

Play by using DISC button

1. Press the DISC button and select the disc no. you want to play.
   The selected disc no. is indicated on the Remote Control display.

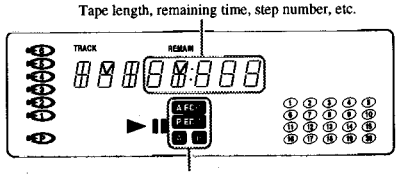
2. Press the ▷ button.
   The selected disc begins to play.

Using the Cassette Deck



CD/Tuner display

Tape length, remaining time, step number, etc.



Edit modes

Listening to a Tape

Listening to a tape: How to use your cassette Deck

The cassette Deck allows you to play, record and dub audio tapes.

- ❑ Most tapes are now recorded with the Dolby NR system (B or C), so first check which type of the Dolby NR system is used on the tape, and select the same system as used for recording.
- ❑ With Automatic Tape Detection, you can listen to type I, II, or IV tapes without changing any settings.

COMPU PLAY

One Touch Play

By pressing either the ▷ or ◁ button (or the ◄ or ► button on the Remote Control) on either Deck A or B, the System will turn on, and if a tape is in the Deck, it will start to play. If no tape is loaded, the System will turn on and wait for you to insert a tape, or select another function.

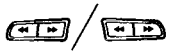
Playback procedure

Regular Play

When the power is already on, you can use this basic procedure:

1. Press the EJECT button for the Deck you want to use.
2. When the cassette carrier opens, put the cassette in, with the exposed part of the tape down, toward the base of the Unit.
   - ❑ If the cassette carrier does not open, turn the System off, then back on and press the EJECT button again.
3. Close the carrier gently.
4. Press the ▷ button to play the front side, or the ◁ button to play the reverse side. The arrow indicator on the pressed button flashes and the tape starts playing.

To stop playing, press the ■ button.
To remove the tape, press the EJECT button.



Fast Left and Fast Right

- ❑ While the tape is stopped, press the ◄◄ button and the tape will wind rapidly onto the left side of the cassette without playing.
- ❑ While the tape is stopped, press the ►► button and the tape will wind rapidly onto the right side of the cassette without playing.

Finding the place you want: Music Scan

Music Scan

To find the beginning of a music track during play, use the Music Scan function. Music Scan searches for blank portions that usually separate tracks, then plays the next song.
Warning: If you use Music Scan on Deck A while recording on Deck B, recording will stop.

Scan back

To find the beginning of the current song

Press the ◄◄ or ►► button during play.

- ❑ Make sure that you press the ◄◄ or ►► button in the opposite direction the tape is playing. Searching stops at the beginning of the current song, and the current song starts automatically.

Scan forward

To find the beginning of the next song

Press the ◄◄ or ►► button during play.

- ❑ Make sure that you press the ◄◄ or ►► button in the same direction the tape is playing. Searching stops at the beginning of the next song, and the next song starts automatically.

Music Scan works by detecting a 4-second long blank at the beginning of each selection, so it won't work well if your tape has:

- No blank at the beginning of a track
- Noise (often caused by much use or poor quality dubbing) which fills the blank with noise.
- Long, very soft passages or pauses in a selection. The scan will detect these as 4-second long blanks. If this happens, just scan again until you reach the selection you want.

More useful things to know:

- **Reverse Mode**
- **Continuous Play**

- **Dolby NR**

Other Useful Features of the Cassette Deck

- ❑ Use **Reverse Mode** to make the tape automatically reverse at the end of a side and start playing the other side. Press the REVERSE MODE button to change from Reverse Mode on (the indicator is lit) to Reverse Mode off, or from off to on.
- ❑ **Continuous Play:** With the Reverse Mode LED on when a tape finishes playing, the Unit always checks to see if a tape is in the other Deck. If there is, it automatically starts playing. This Continuous Play function works regardless of which Deck starts first.
- ❑ Press the DOLBY NR button to change the Dolby Nose Reduction setting. Each time you press this button the setting and the LED changes, as follows.

LED	Dolby system
off	—
red	Dolby B NR
green	Dolby C NR

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Recording

What can you record?

- **Tapes**
- **Radio**
- **CDs**
- **Connected source**

Recording onto a cassette from any of the sound sources is simple. Just place a tape in Deck B, have the source ready, make one or two settings, and you're ready to record. For each source the procedure is a little different and now we'll explain just what to do for each one. If you forget, just come back to the section which has the specific procedures you need. But first, here are a few things to make your recordings better.

Things to Know Before You Start recording

Copyright

- ❑ **It may be unlawful to record or playback copyrighted material without the consent of the copyright owner.**

Reduce hiss — Dolby NR

- ❑ Press the DOLBY NR button to reduce tape hiss. This Unit can use one of two types of the Dolby NR system. Although Dolby C NR is more effective than Dolby B NR, if you play back the tape on another cassette Deck which has only Dolby B NR, you may have better results recording with Dolby B NR.

Recording level

- ❑ The recording level, which is the volume at which the new tape is being made, is automatically set correctly, so it is not affected by the VOLUME control on the amplifier. Thus, during recording you can adjust the sound you are actually listening to without affecting the recording level.

Erasure protection

- ❑ Two small tabs on the back, one for side A and one for side B, can be removed to prevent accidental erasure or re-recording. To record on a cassette with the tabs removed, you must cover the holes with adhesive tape first. However, when a type II tape is used, only cover part of the hole as shown, since the other part of the hole is used to detect the tape type.

Recording sound mode

- ❑ When recording, you can use the sound effect modes to condition the music as it is recorded. But when recording using CD Direct, Auto Edit or Program Edit, once recording has started, these settings cannot be changed. When recording from cassette Deck A to Deck B, the sound effects cannot be used, because the signal doesn't go through the amplifier. This method gives you the highest quality dubbed tapes.

Tape Type

- ❑ Type I, Type II and Type IV tapes can be used for recording.

CAUTION: If recordings you have made have excessive noise or static, the System may be too close to a TV which was on during the recording. Either turn off the TV or increase the distance between the TV and the System.

Standard recording: Any source to tape

Standard Recording

This is the basic method for recording any source. The System also has special ways for recording CD to tape, and tape to tape, which save you time and effort, as well as give you some special effects.
However, when you need to add a selection to a tape you have made, or are combining selections from several sources on one tape, use the method described below; just substitute the source you want, such as tape in Deck A, or CD, or radio in this procedure. You can also record from an auxiliary source with this procedure.

Source to tape: Step by step

To Record Any Sound Source to Tape

Follow these steps to record from any sound source onto a tape in Deck B.

1. Insert a blank or erasable tape into Deck B.
2. Press the REC PAUSE button.
   The REC PAUSE indicator lights up.
3. Press the REVERSE MODE button if you want to record on both sides of the tape.
   The REVERSE MODE indicator lights up.
4. Prepare the source, for example,tuning in a radio station, loading CDs, turning on connected equipment.
5. On Deck B, press either the ▷ button to record on the front side, or the ◁ button to record on the reverse side.

To pause at any time during the recording process
Press the REC PAUSE button again. Then press either the ▷ or ◁ button on Deck B to restart recording.

To stop at any time during the recording process
Press the ■ button on Deck B.

CAUTION: During recording, DO NOT change the source or change discs. Otherwise, recording will be interrupted.

CD to tape recording: Introduction

CD to Tape Recording

There are four ways to record from CD to tape:

- **Standard Recording** — Described above.
- **CD Direct Recording** — Everything on the CD goes onto the tape in the order it is on the CD, or according to an order you have set in a program.
- **Auto Edit Recording** — Your System figures out which selections to put on which side of the tape, so a selection isn't cut off before it's finished when the tape runs out.
- **Program Edit Recording** — First you select tracks to record by using the programming method described on page 14, and then start play and recording simultaneously.

CD Direct Recording: Step by step

CD Direct Recording

1. Prepare CDs. (See page 11.)
2. Set the sound effect mode if you want.
3. Insert a cassette in Deck B to record on.
   - If you want to record on both side of the tape, press the REVERSE MODE button on the cassette Deck so that the REVERSE MODE indicator lights up.
4. Press the CD REC START button on the cassette Deck.
   The System plays the CDs (from the disc on the PLUS 1 tray then the discs in the magazine) and starts recording.

   At the end of the tape, the Unit automatically goes back to the beginning of the last selection and re-records it, this time gently fading out at the end. If you selected the Reverse Mode, the reverse side starts with the last selection on the front side and will be faded out at the end again. (A 10 second blank is created at the beginning of the reverse side.) When the tape is finished, the Unit stops the CD and the cassette deck.

To stop at any time during the recording process
Press the ■ button on Deck B.

For CD Direct Recording using more than one disc, use a blank tape. If you use a pre-recorded tape, pre-recorded sound may not be erased between newly-recorded tracks.

Auto Edit Recording: Introduction

Auto Edit Recording

Using Auto Edit, you can record the CD tracks to fit the tape, so a selection isn't cut off. Auto Edit is one of the best ways to copy all of a CD onto a tape.
Auto Edit programs the CD tracks in numerical order. To prevent the end of the last track on the front side from being cut off, the last track on the front side is selected to fit on the remaining tape length.

Auto Edit Recording: Step by step

1. Prepare CDs. (See page 11.)
2. Set the sound effect mode if you want.
3. Press the EDIT button on the CD player repeatedly until "A. EDIT" lights up on the CD/Tuner display.
4. Press the SEARCH/EDIT TIME I◄◄ or ►►I button (or the I◄◄ or ►►I button on the Remote Control) repeatedly to set the tape length.
   - You can select a different length of tape from ten possibilities programmed into the System: 40, 46, 50, 54, 60, 64, 70, 74, 80, 84, 90. Cycle through these choice using the SEARCH/EDIT TIME I◄◄ or ►►I button (or the I◄◄ or ►►I on the Remote Control).

   - You can use the track button (the CD 10KEY button and the numeric key pad on the Remote Control) to set the tape length as you wish. In this case, it is not necessary to press the SIDE A/B button in step 5.
5. Press the SIDE A/B button.

6. Select a disc with the disc buttons (1 to 6 and P).
   The display shows which tracks will go on the front side (A) and which on the reverse side (B). Each time you press the SIDE A/B, the display switches between A and B.
7. Insert a blank or erasable tape in Deck B.
   - If you want to record on both sides of the tape, press the REVERSE MODE button on the cassette Deck so that the REVERSE MODE indicator lights up.
8. Press the CD REC START button on the cassette deck.
   The Unit will automatically rewind the tape to the beginning of the front side, create a 10 second blank, turn on the CD and start recording. (A 10 second blank is also created on the beginning of the reverse side.)

- After the recording is finished, press the PLAY MODE button repeatedly until "CONTINUE" lights up on the CD/Tuner display.

To stop at any time during the recording process
Press the ■ button on Deck B or the ■/CANCEL button on the CD player.

To exit edit mode and delete the program
Press the PLAY MODE button so "A.EDIT" is no longer lighted on the CD/Tuner display (the Unit must be in stop mode).

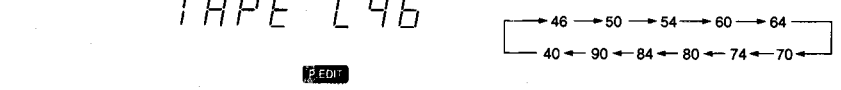
Using Auto Edit, you can program up to 16 tracks for each side of the tape. Also you can only program disc track numbers up to 31.

Program Edit Recording: Step by step

Program Edit Recording

Using Program Edit, you can record only the CD tracks you want, and fit them onto the tape. Program Edit is one of the best ways to make a tape of your favourite songs.

1. Prepare CDs. (See page 11.)
2. Set the sound effect mode if you want.
3. Press the EDIT button on the CD player repeatedly until "P. EDIT" appears on the CD/Tuner display.
4. Press the SEARCH/EDIT TIME I◄◄ or ►►I button (or the I◄◄ or ►►I button on the Remote Control) repeatedly to set the tape length.
   - You can select a different length of tape from ten possibilities programmed into the System: 40, 46, 50, 54, 60, 64, 70, 74, 80, 84, 90. Cycle through these choices using the SEARCH/EDIT TIME I◄◄ or ►►I button (or the I◄◄ or ►►I button on the Remote Control).



   - You can use the track button (the CD 10KEY button and the numeric key pad on the Remote Control) to set the tape length as you wish. In this case, it is not necessary to press the SIDE A/B button in step 5.

5. Press the SIDE A/B button and select the tracks you want to record on the front side (A). (See "Program Play" on page 14. For Program Edit, however, it is impossible to program all the tracks on a disc in one program step.)
   The display shows which tracks will go on the front side (A).
   - ❑ If the total playing time for the front side (A) exceeds the tape length for this side, the excess playing time is displayed, blinking. During recording, the last track on this side will be recorded fading out at the end of the tape.
6. Press the SIDE A/B button and select the tracks you want to record on the reverse side (B). (See "Program Play" on page 14. For Program Edit, however, it is impossible to program all the tracks on a disc in one program step.)
   The display shows which tracks will go on the reverse side (B).
   - ❑ If the total playing time for the reverse side (B) exceeds the tape length for this side, the excess playing time is displayed, blinking. During recording, the last track on this side will be recorded fading out at the end of the tape.
7. Insert a blank or erasable tape in Deck B.
   - ❑ If you want to record on both sides of the tape, press the REVERSE MODE button on the cassette Deck so that the REVERSE MODE indicator lights up.

8. Press the CD REC START button on the cassette Deck.
   The Unit will automatically rewind the tape to the beginning of the front side, create a 10 second blank, turn on the CD and start recording. (A 10 second blank is also created on the beginning of the reverse side.)

- ❑ After the recording is finished, press the PLAY MODE button repeatedly until "CONTINUE" lights up on the CD/Tuner display.

To stop at any time duing the recording process
Press the ■ button on Deck B or the ■/CANCEL button on the CD player.

To exit edit mode and delete the program
Press the PLAY MODE button so "P. EDIT" is no longer lighted on the CD/Tuner display (the Unit must be in stop mode).

- ❑ If you choose the wrong tracks during programming, press the ■/CANCEL button on the CD player. Each time you press the button, the last-chosen track is deleted from the program.
- ❑ Using Program Edit, you can program up to 16 tracks for each side of the tape. Also you can only program disc track numbers up to 31.
- ❑ If you want to make changes in a program while the front side is recording, make sure that the display shows the tracks for the front side (A) when you restart recording. If not, press the SIDE A/B button.

Tape to Tape Recording (Dubbing)

Tape to tape dubbing: Introduction

Recording from one tape to another is called dubbing.
You can dub at regular speed for the best possible quality, or with a slight loss in sound quality you can dub at high speed. With high speed it takes only about one-half the time to copy a tape.

- ❑ To dub both sides of a tape, start from side A for both Deck A and Deck B, and press the REVERSE MODE so that the REVERSE MODE indicator lights up.
- ❑ It is preferable that the type of tape (Type I, II or IV) you record from be the same as the type you record onto.

Regular speed dubbing: Step by step

Regular Speed Dubbing

1. Insert a source cassette you want to copy from into Deck A for playback.
2. Insert a blank or erasable cassette you want to copy onto into Deck B for recording.
3. Press the REC PAUSE button on Deck B.
4. Press the ▷ button (or the ◁ button) on Deck B.
   Recording starts.
   - • To advance the leader tape (the beginning of the tape on which you cannot record), start recording first and wait about 10 seconds before starting Deck A.
5. Press the ▷ button (or the ◁ button) on Deck A.
   Deck A starts playing.

High speed dubbing: Step by step

To stop at any time during the dubbing process
Press the ■ button on both Deck A and Deck B.

High Speed Dubbing

Although the quality of the dubbed tape is a little less, high speed dubbing is a very convenient way to record from one tape to another.

1. Insert a source cassette you want to copy from into Deck A, and a blank or erasable cassette to be copied onto in Deck B.
2. For each Deck, select the side (A or B) to start with.
   To change the side, press the ◁ or ▷ button and then quickly press the ■ button on the same deck.
   - ❑ The tape will travel in the direction of the lit arrow indicator on the ◁ or ▷ button for each deck.

3. Press the HIGH SPEED DUBBING button on the cassette deck.
   Both Decks start, Deck A playing and Deck B recording.
   - ❑ The sound you hear is strange because it is much faster than usual, and you may not want to listen to it. Turn it down with the VOLUME control.
   - ❑ You can listen to another source, such as the radio or the CD player, just as if you weren't dubbing.

To stop at any time during the dubbing process
Press the ■ button on Deck B.

To record selections from several different tapes during high speed dubbing.
When you want to take selections from several different tapes and combine them on one tape during high speed dubbing, follow these steps:

1. Press the ■ button on Deck A.
   - ❑ This causes Deck A to stop, so you can change tapes, and Deck B makes a few seconds blank and pauses.
     - • If you don't want to make a few seconds blank, press the REC PAUSE button before pressing the ■ button on Deck A.
2. Change the tape in Deck A.
3. Press the HIGH SPEED DUBBING button to start Deck A playing and Deck B recording again.

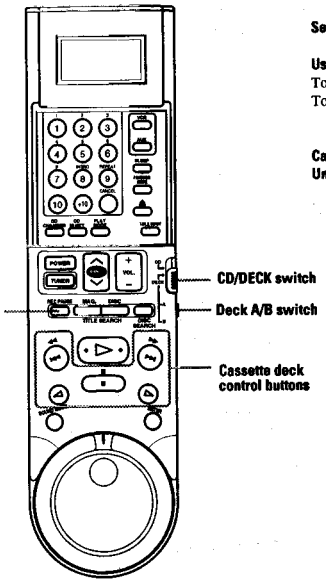
- ❑ Dolby NR is inactive in dubbing mode regardless of the setting of the DOLBY NR button. The dubbed tape automatically contains the same processing as the source tape.
- ❑ You cannot dub using the sound effect modes, such as D. CLUB, HALL, STADIUM etc.

Recording with the Timer

The cassette deck can be set to record a tape automatically. This is especially useful for recording broadcasts when you are not at home or late at night when you are asleep.

1. Insert a cassette for recording into Deck B.
2. Set the REC timer, by following the steps in "Setting the REC (Recording) Timer" (Page 24).

Operating the Cassette Deck by Remote Control

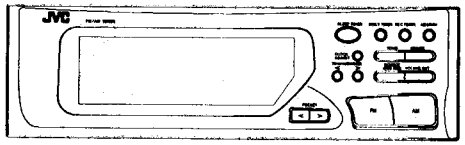


Set the CD/DECK to the DECK setting.

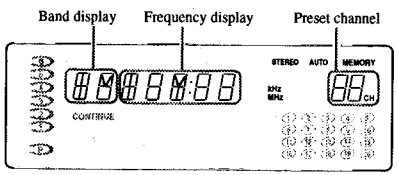
Use the Deck A/B switch to select the Deck you want to use.
To operate Deck A → Switch A
To operate Deck B → Switch B.

Cassette deck control buttons and REC PAUSE buttons operate the same way as on the Unit itself.

Using the Tuner



CD/Tuner display



Listening to the Radio

You can listen to both FM and AM stations. Stations can be tuned in manually, automatically, or from preset memory storage.

❑ Before listening to the radio:
- Check that both the FM and AM antennas are firmly connected.

COMPU PLAY Radio

One Touch Radio

Just press the FM button to turn on the Unit and start playing the most recent FM station tuned in, or press the AM button to listen to the most recent AM station tuned in.

❑ You can switch from any other sound source to the radio by pressing either the AM or FM button.

Tuning In a Station

Press the FM or AM button to turn on the radio. The CD/Tuner display shows the station frequency tuned to.

Three ways to tune in a station

Three ways to select a station

❑ Press the TUNING/DIMMER < or > button repeatedly to move from frequency to frequency until you find the one you want.

OR

❑ Hold down the TUNING/DIMMER < or > button, the frequency starts changing on the CD/Tuner display. When a station is tuned in, "TUNED" lights up on the display and the frequency stops changing.

OR

❑ (Possible only after presetting stations.)
Press once and release the PRESET < or > button to go to the next preset station, or hold the PRESET < or > button to cycle through the preset stations: release the button when the preset station you want shows on the CD/Tuner display.

How to preset FM and AM radio stations

Presetting Stations

You can store up to 40 of your favorite radio stations (FM and AM) in memory, giving you quick, easy access to these stations.

1. Select a band by pressing either the FM or AM button.
2. Press the TUNING/DIMMER < or > button to tune in a station.
3. Press the MEMORY button on the Tuner.
   On the CD/Tuner display, "MEMORY" will blink for 5 seconds.
   ❑ During these 5 seconds while "MEMORY" is blinking you can assign a channel number to the station and enter it into the memory.
4. Select a channel number by pressing the PRESET < or > button until you find the channel number you want.
5. Press the MEMORY button and the station will be assigned to the channel number showing on the CD/Tuner display.
   ❑ If a station has been previously stored using the same channel number, this will be erased and the newly selected station will be stored.
   ❑ If "MEMORY" in the CD/Tuner display goes off, start again from step 3.
6. Repeat steps 1 - 5 for each station you want to store in memory with a preset number.

Caution! If the Unit is unplugged or if a power failure occurs, the preset stations stored in memory may be lost.

Receiving In Stereo or Mono

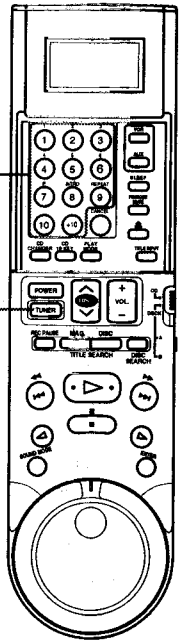
The Unit can receive broadcasts in either stereo or mono. When "AUTO" lights up on the CD/Tuner display, the Unit automatically receives broadcasts in the mode they are transmitted. (When a stereo broadcast is received, "STEREO" lights up on the display.) Furthermore, you won't hear noise while turning in stations. Usually, leaving the Unit in Auto Mode, with "AUTO" lit, gives you the best reception.

FM MODE /MUTE

When an FM stereo broadcast's reception is poor:
Press the FM MODE/MUTE button on the Remote Control; the "AUTO" indicator goes off. The Unit switches to mono reception only, but sound quality improves.

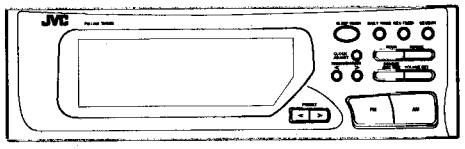
To restore stereo effect, press the FM MODE/MUTE button again so that "AUTO" appears on the display.

Operating the Tuner by Remote Control

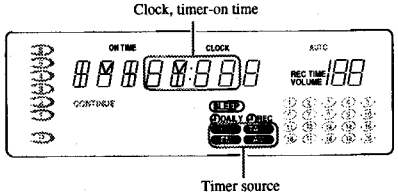


1. Press the TUNER button.
   Switch to Tuner to call up the radio station last received.
   ❑ Press the TUNER button, and the numeric keypad changes to Tuner mode.
2. Call up the preset stations using the numeric key pad.

Using the Timers



CD/Tuner display



Three Timers:
- **REC TIMER**
- **DAILY TIMER**
- **SLEEP TIMER**

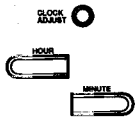
The timers let you control recording and listening functions automatically.
Three types of timers are available:

- **REC (Recording) Timer** — Unattended recording of radio broadcasts. You can set the starting time and length of the recording.
- **DAILY Timer** — Wake up to music from any source.
- **SLEEP Timer**— Fall asleep and have your System turn off automatically after a certain length of time.

IMPORTANT!
Set your clock

Clock Setting

The timers depend on the clock: The clock must be right for the timers to work as you expect.
Special Notice: The clock must be set, or the timers cannot be set!



So, set the clock first.

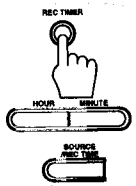
1. Press the CLOCK ADJUST button.
2. Set the hour by pressing the HOUR button.
   Each time you press it, the hour advances by one. Hold the button down, and the hour displayed will advance continuously, until you release the button.
3. Set the minutes by pressing the MINUTE button.
   Each time you press it, the minutes advance by one. Hold the button down, and the minutes advance in ten minute increments, until you release the button.
4. Press the CLOCK ADJUST button again and the clock is set for the hour and minute you have selected, starting from zero seconds.

Caution! If there is a power failure, the clock loses its setting. The display shows "AM 12:00", and the clock must be reset.

Setting the REC (Recording) Timer

With the Recording Timer you can make a tape of a radio broadcast automatically whether or not you are home. For the timer to work correctly, you need to make sure of the following in addition to setting the time for the radio and tape recorder to come on:

- ❑ You can set the Recording Timer whether the Unit is on or off.
- ❑ The tape you want to record onto must be in Deck B.
- ❑ The radio station whose program you want to tape must be the last one played before timer comes on.



Procedure for setting the Recording Timer:

1. Press the REC TIMER button so that "REC" blinks on the CD/Tuner display. As long as it is blinking, you can continue with the setting process.
   - ❑ If you wait too long, and it stops before you are done, just press the REC TIMER button twice and start over.
2. Set the time you want the radio to come on, and put a tape in Deck B to record on:
   Press the HOUR button to set the hour and the MINUTE button to set the minute.
3. Press the SOURCE/REC TIME button to set the length of time for the recording.
   Each time you press this button, the duration increases by one minute. If you hold the button down, it will advance in ten minute increments up to 120 minutes, which is the maximum time you can set.
   - ❑ At the end of the set length of time the radio and Deck B will shut off.
     - If you set no time, but leave the display showing "— : —", the System will not shut off, but keep recording/playing until you shut it off.

4. Press the REC TIMER button again, or wait eight seconds.
   The set contents are displayed for a few seconds and the "REC" indicator lights up.
   The Unit will memorize the setting. When the set time comes, the System turns the power on and records the broadcasting station you selected last, before turning the power off.
   - ❑ If you press any button while the Recording Timer is being activated, the recording will stop.

Before the set time comes

- ❑ Check that tape direction is correct. This is important especially when Reverse Mode is off.
- ❑ Set Reverse mode on if you want to record on both sides of the tape.
- ❑ Select the Sound mode if you want to record with one of the Sound mode (D. CLUB, HALL STADIUM, etc.).
- ❑ Set the VOLUME control to MIN so that no sound comes out from speakers when the Recording Timer switches on the System. This is important especially if you will be out during the recording.

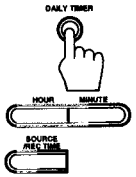
It is very easy, and can be very disappointing, to forget to put in a tape, or to accidentally leave a tape in Deck B you don't want recorded over. Although this happens to almost everyone at one time or another, we hope it won't happen to you!

To Change the Recording Timer setting
Press the REC TIMER button twice ("REC" reappears) and make any changes you want.
To cancel the Recording Timer setting
Press the REC TIMER button again so that "REC" goes off on the CD/Tuner display.

Setting the DAILY Timer

With this timer you can wake up to music from a CD, tape or your favourite radio program.

- ❑ You can set the DAILY Timer whether the Unit is on or off.



Procedure for setting the DAILY Timer:

1. Press the DAILY TIMER button so that "DAILY" blinks on the CD/Tuner display.
2. Set the time you want the Unit to turn on:
   - ❑ Press the HOUR button to set the hour and the MINUTE button to set the minute.
3. Press the SOURCE/REC TIMER button to set the source.
   - ❑ Each time you press this button, the display shows one of the four possible sources: CD, TAPE, FM or AM. Select one.
     - If you select FM or AM as the source, the last played station is the one which comes on at the set time.
     - If the CD is the source, when the set time comes, the Unit plays in the Play Mode you set before turning the power off.
4. Press the VOLUME SET button to set the volume level.
   - ❑ Each time you press this button, the Unit gives you one of the following settings:

Display	What it means
VOLUME — —	Volume set to level used before the power was shut off
VOLUME 1	Volume barely on
VOLUME 2	Volume at about a 1/4 turn of the volume control
VOLUME 3	Volume at about a 3/8 turn of the volume control

5. Press the DAILY TIMER button again, or wait eight seconds.
   The set contents are displayed for a few seconds and the "DAILY" indicator lights up.
   The Unit will memorize the setting.
6. Turn the power off.
   When the set time comes, the System turns on ("DAILY 60" appears on the CD/Tuner display), plays the source you have selected for 60 minutes, and then the Unit turns off.
   - ❑ If you press any button while the DAILY Timer is being activated, the Unit will not turn off automatically after 60 minutes.

Before turning off the Unit

- ❑ If the source is tape:
  - Check that the tape direction is correct. This is important especially when Reverse Mode is off.
  - Deck B has priority, so if tapes are in both decks, the tape in Deck B plays first.
  - Set Reverse Mode on if you want to play both sides of the tape.
  - If you're not home at the designated time, be sure to set the volume level to minimum.

To change the DAILY Timer setting
Press the DAILY TIMER button twice ("DAILY" reappears) and make any changes you want.
To cancel the DAILY Timer setting
Press the DAILY TIMER button again so that "DAILY" goes off on the CD/Tuner display.

Setting the SLEEP Timer

Use the sleep timer to turn the Unit off after a certain number of minutes when it is playing. Setting this timer, you can fall asleep to music and know your Unit will turn off by itself rather than play all night.

- ❑ You can only set the Sleep Timer when the Unit is on and a source is playing.

To set the SLEEP Timer, follow this procedure:

1. With the System on and a source playing, press the SLEEP TIMER button. The "SLEEP" indicator on the CD/Tuner display will start blinking.

2. Set the length of time you want the source to play before shutting off.
   - ❑ Each time you press this button while the "SLEEP" indicator is blinking, it changes the number of minutes shown on the display in this sequence:
     → **10** → **20** → **30** → **60** → **90** → **120** → Sleep timer off → (back to the beginning)

When the number of minutes you want shows on the display, just wait 5 seconds until the indicator stops blinking, but remains lighted.

The Unit is now set to turn off after the number of minutes you set.

To change the SLEEP Timer setting
Press the SLEEP TIMER button until the number of minutes you want appears on the display.
To cancel the SLEEP Timer setting
Press the SLEEP TIMER button until the "SLEEP" indicator goes off on the display.
Turning off the Unit also cancels the SLEEP Timer.

Timer Priority

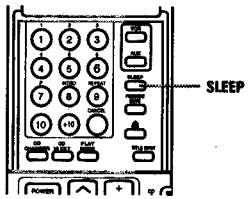
Since each timer can be set independently, you may wonder what happens if the settings overlap. Here are the priorities for each timer:

- ❑ The Recording Timer always has priority. This means that:
  - If another timer is set to come on during a time the Recording Timer is operating, the other timer just won't come on at all, so you will always get the entire program on tape.
  - If the Recording Timer is set to come on while another timer is being activated, the other timer will shut off 10 seconds before the Recording Timer is set to turn on, and the Recording Timer will then take over.
- ❑ The SLEEP Timer has priority over the DAILY Timer. This is important because if you set the SLEEP Timer to start before and then end after the DAILY Timer would start, the DAILY Timer doesn't come on. So if you want your alarm to go off as scheduled, be sure the SLEEP Timer shuts off before the DAILY Timer is set to turn on the Unit.

Adjusting the Brightness of the Display

In stand-by mode, you can adjust the brightness of the clock display.
Press the TUNING/DIMMER > button makes the display brighter.
Press the TUNING/DIMMER < button makes the display dimmer.

Operating the Timer by Remote Control



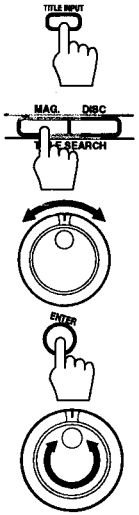
The SLEEP button operates the same way on the Remote Control as on the Unit itself.

Title Functions

If you program magazine titles and disc titles into the Remote Control, you can call up the magazine or disc by title, and conduct a search by title.
Title functions are operated by Remote Control

- ❑ You can program 26 magazine titles "A" through "Z", and 156 disc titles (up to 8 letters).
- ❑ Use magazine XC-M75, sold separately, when using magazines other than those included in the Unit.
- ❑ When using the title function, put the Magazine Seal that is included in the Unit.

Inputting Magazine Titles



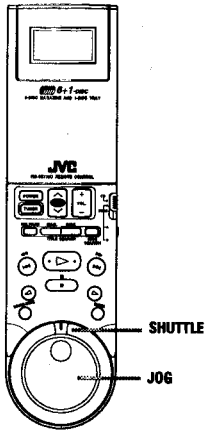
1. Press the TITLE INPUT button.
   "TITLE INPUT" is indicated on the display, and "MAG.DISC" blinks.

2. Press the MAG. button.
   This changes "MAG. DISC" to "MAG.", and "MAG- A" blinks.
   - ❑ When a magazine title has already been set, the magazines that are not titled are displayed in alphabetical order.

3. Turn the SHUTTLE.
   Select a magazine "A" through "Z" that you want to title.
   - ❑ Turn the SHUTTLE and hold it until the letter of the magazine you want is displayed.
   - ❑ When titling magazine A, skip step 3. Go to step 4.

4. Press the ENTER button.
   The magazine that you attach a title to is selected, and the cursor of the desired letter lower left of the display..

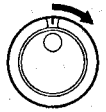
5. Turn the JOG.
   Turn the JOG to input the letters you selected.



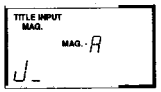
Available characters

Space

	A	B	C	D	E	F
G	H	I	J	K	L	M
N	O	P	Q	R	S	T
U	V	W	X	Y	Z	1
2	3	4	5	6	7	8
9	0	_	-	+	'	



6. Turn the SHUTTLE to the right.
   The cursor of the next letter blinks.
   Turn the SHUTTLE and hold it until the cursor of the magazine you want is displayed.

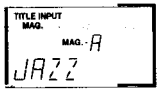


7. Turn the JOG to select letters.

8. Repeat steps 6 and 7, until you've finished spelling the title (maximum 8 letters).

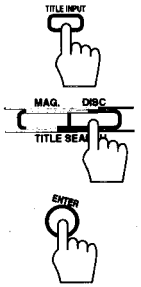
   ❑ If you make a mistake, turn the SHUTTLE to the left until you come to the letter that is wrong. Then, turn the JOG to input the correct letter.

9. Press the ENTER button.
   This programs the magazine title.



   ❑ The display automatically clears after about 30 seconds. Remote control operations are not possible until the display clears. Either press the ENTER button again or press the MAG. or TITLE INPUT button to clear the display and make remote control operations available immediately.

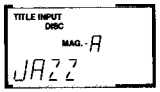
❑ If the display clears in the middle of programming a title, restart from the beginning.
❑ To stop in the middle of inputting a title, press the TITLE INPUT button.
❑ Repeat the above steps to add titles to other magazine, "A" through "Z".



Inputting Disc Titles

Titling the disc in the magazine

1. Press the TITLE INPUT button.



2. Press the DISC button.
   "MAG.-A" blinks.
   If the magazine title is already input, that title is also indicated.

3. Turn the SHUTTLE to select the magazine where the disc you want to title is located.

4. Press the ENTER button.
   "DISC-1" blinks.

5. Turn the JOG to select the number of the disc you want to title.
   ❑ When titling DISC-1, skip this step. Go to step 6

6. Press the ENTER button.

7. Use the JOG or the SHUTTLE to input a title up to 8 letters long.

8. Press the ENTER button.
   This programs the disc title.

   ❑ The display automatically clears after about 30 seconds. Remote control operations are not possible until the display clears. Either press the ENTER button again or press the DISC or TITLE INPUT button to clear the display and make Remote Control operations available immediately.

❑ If the display clears in the middle of programming a title, restart operations from the beginning.
❑ To stop in the middle of inputting a title, press the TITLE INPUT button.
❑ Repeat these steps to title up to 156 discs.

Title Search Functions

There are two title search functions: one searches for magazine titles and the other searches for disc titles.

Magazine title search

This function is capable of calling up magazine titles and the discs in those magazines.

1. Press the MAG. button.
   The title of magazine A is displayed.

2. Turn the SHUTTLE to select the title of the magazine that has the disc you want to call up.

3. Turn the JOG and the titles of the discs input in the magazine you've selected will be displayed one after the other.
   ❑ When playing the disc you've called up, press the ▷ CD control button.
   Note: The CD player plays the disc number selected from the magazine in the player at that time regardless of the disc title input in the Remote Control.
   To play the disc of the title called up by Remote Control, first insert the selected magazine in the CD player.

To cancel the magazine title search, press the MAG. button again.

Disc title search

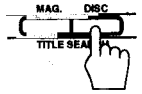
The disc titles are called up in order

1. Press the DISC button.
   The title of DISC-1 in magazine A is displayed.

2. Turn the JOG to call up the disc title.
   Turn the JOG to the right and the disc titles input in the magazine are displayed in alphabetical order.
   Turn the JOG to the left and the disc titles input in the magazine are displayed in reverse-alphabetical order.

   ❑ Turn the SHUTTLE to change the magazine display.
   ❑ To play the disc you've called up, press the ▷ on the CD control button.
   Note: The CD player plays the disc number selected from the magazine in the player at that time regardless of the disc title input in the Remote Control.
   To play the disc of the title called up by Remote Control, insert the magazine shown on the display into the CD player.

To cancel the disc title search, press the DISC button again.



Disc Search Function

This function makes it easy for you to search for the magazine and number in which the CD you want to open can be found.

1. Press the DISC SEARCH button.
   "DISC SEARCH" lights up on the display.
   The cursor blinks.

2. Use the JOG and the SHUTTLE to input the title of the disc you want to search for.
   ❑ If you cannot input the full title, it is possible to search for the title using only the first one or two letters.

3. Press the ENTER button.
   Open search.
   When you find the title that meets the conditions you've input, the disc title, magazine letter (A-Z) and disc number are displayed.

   ❑ To search again using the same conditions, turn the JOG.

❑ The search range is from DISC-1 of magazine A to DISC-6 of magazine Z. If the search-title you input cannot be found, the display alternates between "NOT" and "FOUND."

To cancel the disc search function, press the DISC SEARCH button again.

English

Care and Maintenance — General Notes

Compact Discs

Handle your compact discs, cassette tapes, and cassette Deck carefully, and they will last a long time.

- Remove the CD from the case by holding it at the edges while pressing the center hole lightly.
- Do not touch the shiny surface of the CD, or bend the CD.

- Put the CD back in its case after use to prevent warping.
- Be careful not to scratch the surface of the CD when placing it back in the case.
- Avoid exposure to direct sunlight, temperature extremes, and moisture.

- A dirty CD may not play correctly. If a CD does become dirty, wipe it with a soft cloth in a straight line, from center to edge.

CAUTION: Do not use any solvent (for example, conventional record cleaner, spray thinner, benzine, etc.) to clean a CD.

Moisture Condensation

Moisture may condense on the lens inside the Unit in the following cases:

- After starting the heating in the room.
- In a damp room.
- If the unit is brought directly from a cold to a warm place.

Should this occur, the Unit may malfunction. In this case, leave the unit turned on for a few hours until the moisture evaporates, unplug the AC power cord, and then plug it in again.

In general, you will have the best performance by keeping your tapes, CDs, and the mechanism clean.

- Store tapes and CDs in their cases, and keep them in cabinets or on shelves.
- Keep the cassette deck tape doors and the CD tray closed when not in use.

Cassette Tapes

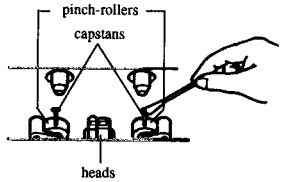
- If the tape is loose in its cassette, take up the slack by inserting a pencil in one of the reels and rotating.
- If the tape is loose, it may get stretched, cut, or caught in the cassette.

- Do not touch the tape surface.

- Do not store the tape:
  - In dusty places
  - In direct sunlight or heat
  - In moist areas
  - On a TV or speaker
  - Near a magnet

Cassette Deck

- If the heads, capstans, and pinch-rollers of the cassette Deck become dirty, the following will occur:
  - Loss of sound quality
  - Discontinuous sound
  - Fading
  - Incomplete erasure
  - Difficulty recording
- Clean the heads, capstans, and pinch-rollers using a cotton swab moistened with alcohol.



- If the heads become magnetized, the Unit will produce noise or lose high frequencies.
- To demagnetize the heads, turn off the Unit, and use a head demagnetizer (available at electronics and record shops).

Only For The U,S,A

Troubleshooting

- If you are having a problem with your System, check this list for a possible solution before calling for service.
- If you cannot solve the problem from the hints given here, or the Unit has been physically damaged, call a qualified person, such as your dealer, for service.

Symptom	Possible Cause	ACTION
No sound is heard.	Connections are incorrect, or loose.	Check all connections and make corrections. (See pages 3 - 5.)
Unable to record.	Cassette record protect tabs are removed.	Cover holes on back edge of cassette with tape.
Poor radio reception	The antenna is disconnected. The AM loop antenna is too close to the Unit. The FM wire antenna is not properly extended and positioned.	Re-connect the antenna securely. Change the position and direction of the AM loop antenna. Extend FM wire antenna to the best reception position.
The CD skips.	The CD is dirty or scratched.	Clean or replace the CD.
Unable to operate the Remote Control.	The path between the Remote Control and the sensor on the Unit is blocked. The batteries have lost their charge.	Remove the obstruction. Replace the batteries.
The CD tray cannot be operated.	The main AC power cord is not plugged in.	Plug in the AC power plug.
The CD does not play.	The CD is upside down.	Put the CD in with the label side up.
Operations are disabled.	The built-in microprocessor has malfunctioned due to external electrical interference.	Unplug the Unit then plug it back in.
The cassette door cannot be opened.	During tape playing, the power cord is unplugged.	Plug in the power cord and press eject.

Specifications

Amplifier/Cassette Deck Section

Amplifier

Output Power	
SPEAKERS A (Main)	**18 watts per channel, min. RMS, both channels driven, into 8 ohms from 40 Hz to 20 kHz, with no more than 0.9% total harmonic distortion.**
SPEAKERS B (Subwoofer)	**32 watts per channel, min. RMS, both channels driven into 6 ohms, at 80 Hz, with no more than 10% total harmonic distortion.**
Total Harmonic Distortion at Half-Rated Power	0.07%
Input Sensitivity/Impedance (1 kHz)	
VCR	300 mV/47 kohms
AUX	300 mV/47 kohms
Speaker terminals	
Speakers A	8 ohms ~ 16 ohms
Speakers B	6 ohms ~ 16 ohms

Cassette Deck

Frequency response	
Type IV (METAL):	30 - 17,000 Hz
Type II (CrO_2):	30 - 16,000 Hz
Type I (NORMAL):	30 - 15,000 Hz
Wow and flutter	0.09% (WRMS)
Dimensions	245 x 183 x 344 mm (W/H/D) (9-11/16 x 7-1/4 x 13-9/16 inches)
Weight	5.9 kg (13.0 lbs)

CD Automatic Changer/Tuner section

CD Automatic Changer

CD capacity	7 discs
Dynamic Range	96 dB
Signal-to-Noise Ratio	102 dB
Wow and Flutter	Unmeasurable

Tuner

FM Tuner	
Tuning Range	87.5 - 108.0 MHz
AM Tuner	
Tuning Range	530 - 1,710 kHz
Dimensions	245 x 183 x 344 mm (W/H/D) (9-11/16 x 7-1/4 x 13-9/16 inches)
Weight	3.7 kg (8.2 lbs)

Power Specifications

Power Requirements	AC 120 V ∿, 60 Hz
Power Consumption	140 watts

Design and specifications are subject to change without notice.

Only For Canada

Troubleshooting

- If you are having a problem with your System, check this list for a possible solution before calling for service.
- If you cannot solve the problem from the hints given here, or the Unit has been physically damaged, call a qualified person, such as your dealer, for service.

Symptom	Possible Cause	ACTION
No sound is heard.	Connections are incorrect, or loose.	Check all connections and make corrections. (See pages 3 - 5.)
Unable to record.	Cassette record protect tabs are removed.	Cover holes on back edge of cassette with tape.
Poor radio reception	The antenna is disconnected. The AM loop antenna is too close to the Unit. The FM wire antenna is not properly extended and positioned.	Re-connect the antenna securely. Change the position and direction of the AM loop antenna. Extend FM wire antenna to the best reception position.
The CD skips.	The CD is dirty or scratched.	Clean or replace the CD.
Unable to operate the Remote Control.	The path between the Remote Control and the sensor on the Unit is blocked. The batteries have lost their charge.	Remove the obstruction. Replace the batteries.
The CD tray cannot be operated.	The main AC power cord is not plugged in.	Plug in the AC power plug.
The CD does not play.	The CD is upside down.	Put the CD in with the label side up.
Operations are disabled.	The built-in microprocessor has malfunctioned due to external electrical interference.	Unplug the Unit then plug it back in.
The cassette door cannot be opened.	During tape playing, the power cord is unplugged.	Plug in the power cord and press eject.

Specifications

Amplifier/Cassette Deck Section

Amplifier

Output Power

SPEAKERS A (Main): **18 watts per channel, min. RMS, both channels driven, into 8 ohms from 40 Hz to 20 kHz, with no more than 0.9% total harmonic distortion.**

SPEAKERS B (Subwoofer): **32 watts per channel, min. RMS, both channels driven into 6 ohms, at 80 Hz, with no more than 10% total harmonic distortion.**

Total Harmonic Distortion at Half-Rated Power	0.07%
Input Sensitivity/Impedance (1 kHz)	
VCR	300 mV/47 kohms
AUX	300 mV/47 kohms
Speaker terminals	
Speakers A	8 ohms ~ 16 ohms
Speakers B	6 ohms ~ 16 ohms

Cassette Deck

Frequency response	
Type IV (METAL):	30 - 17,000 Hz
Type II (CrO_2):	30 - 16,000 Hz
Type I (NORMAL):	30 - 15,000 Hz
Wow and flutter	0.09% (WRMS)
Dimensions	245 x 183 x 344 mm (W/H/D) (9-11/16 x 7-1/4 x 13-9/16 inches)
Weight	5.9 kg (13.0 lbs)

CD Automatic Changer/Tuner section

CD Automatic Changer

CD capacity	7 discs
Dynamic Range	96 dB
Signal-to-Noise Ratio	102 dB
Wow and Flutter	Unmeasurable

Tuner

FM Tuner	
Tuning Range	87.5 - 108.0 MHz
AM Tuner	
Tuning Range	530 - 1,710 kHz
Dimensions	245 x 183 x 344 mm (W/H/D) (9-11/16 x 7-1/4 x 13-9/16 inches)
Weight	3.7 kg (8.2 lbs)

Accessories

AM Loop Antenna (1)
Remote Control (1)
Batteries R6P(SUM-3)/AA (15F) (2)
Magazine (1)
FM Feeder Antenna (1)
FM Antenna Adaptor (1)
External Wire (1)
Sheet of Magazine Seals (1)

Power Specifications

Power Requirements	AC 120 V ∿, 60 Hz
Power Consumption	140 watts 180 VA

Design and specifications are subject to change without notice.

DX-C770/C990S

— Contents —

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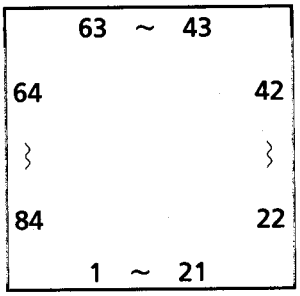
Internal Connections of FL Display 2-7
Disassembly Procedures 2-9
Adjustment Procedures 2-15
Block Diagrams 2-18
Printed Circuit Boards 2-20
Schematic Diagrams 2-23

Description of Major LSIs

■ MN172412J5S (IC901) : SYSTEM CONTROLLER

1. Terminal Layout



2. Key Matrix

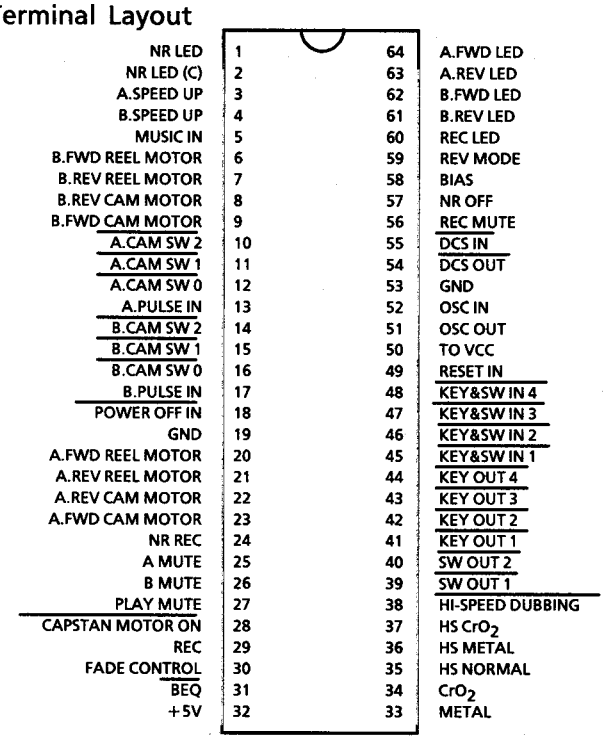
	KEY IN 0	KEY IN 1	KEY IN2
KEY OUT 0	CSRP	DISPLAY	DEMO
KEY OUT 1	SEA	SOUND EFFECT	A. P. OFF
KEY OUT 2	VCR	POWER	AUX

3. Description

Pin No.	symbol	I/O	Description	Pin No.	symbol	I/O	Description
1	S18	O	FL segment control	43	S.DATA IN	I	Data for equalizer filter
2	S17	O	FL segment control	44	D.RST	O	Reset signal to deck controller
3	S16	O	FL segment control	45	LATCH	O	Latch signal for IC802
4	S15	O	FL segment control	46	STB	O	Strobe signal for selectors
5	S14	O	FL segment control	47	DATA	O	Data for selectors
6	S13	O	FL segment control	48	INH	I	Inhibit signal input
7	S12	O	FL segment control	49	REMOCON	I	Remote control signal input
8	S11	O	FL segment control	50	PROT	I	Protector detection
9	S10	O	FL segment control	51	DCS IN	I	Compulink signal input
10	S9	O	FL segment control	52	DCS OUT	O	Compulink signal output
11	S8	O	FL segment control	53	CS C770/C990S	I	Chip select. H:C770
12	S7	O	FL segment control	54	JOG IN1	I	Music jog input 1
13	S6	O	FL segment control	55	JOG IN2	I	Music jog input 2
14	S5	O	FL segment control	56	TU.RST	O	Reset signal to tuner
15	S4	O	FL segment control	57	DECK P. ON/OFF	O	Deck power control signal
16	S3	O	FL segment control	58	DECK RESET	O	Deck μ-com reset signal
17	S2	O	FL segment control	59	ACO	O	Power supply control signal
18	S1	O	FL segment control	60		--	Not used
19	1G	O	FL grid control	61	SPK	O	Speaker relay control signal
20	2G	O	FL grid control	62	V.UP	O	Main volume control
21	3G	O	FL grid control	63	V.DOWN	O	Main volume control
22	4G	O	FL grid control	64	S.MUTE	O	Source muting
23	−BP	--	Power supply for FL display	65	VOL IND.	O	Indication control
24	5G	O	FL grid control	66	4AMP IND	--	Not used
25	6G	O	FL grid control	67	STANDBY IND	O	Indication control
26	7G	O	FL grid control	68	RST	I	System reset input
27	8G	O	FL grid control	69	X1	--	Connect to GND
28	9G	O	FL grid control	70	X2(NC)	--	Not used
29	10G	O	FL grid control	71	GND	--	GND
30	11G	O	FL grid control	72	OSC2	I/O	Oscillation terminal
31	12G	O	FL grid control	73	OSC1	I/O	Oscillation terminal
32	KO0	O	Key matrix output	74	VDD	--	Power supply
33	KO1	O	Key matrix output	75	NC	--	Not used
34	KO2	O	Key matrix output	76	S27	O	FL segment control
35		--	Connect to +5V	77	S26	O	FL segment control
36	KI0	I	Key matrix input	78	S25	O	FL segment control
37	KI1	I	Key matrix input	79	S24	O	FL segment control
38	KI2	I	Key matrix input	80	S23	O	FL segment control
39		--	Connect to +5V	81	S22	O	FL segment control
40	S.CS	O	Chip select signal for equalizer filter	82	S21	O	FL segment control
41	S.CLK	O	Clock signal for equalizer filter	83	S20	O	FL segment control
42	S.DATA OUT	O	Data from equalizer filter	84	S19	O	FL segment control

■ HD614081SE39 (IC203) : Deck controller

Terminal Layout



Key matrix

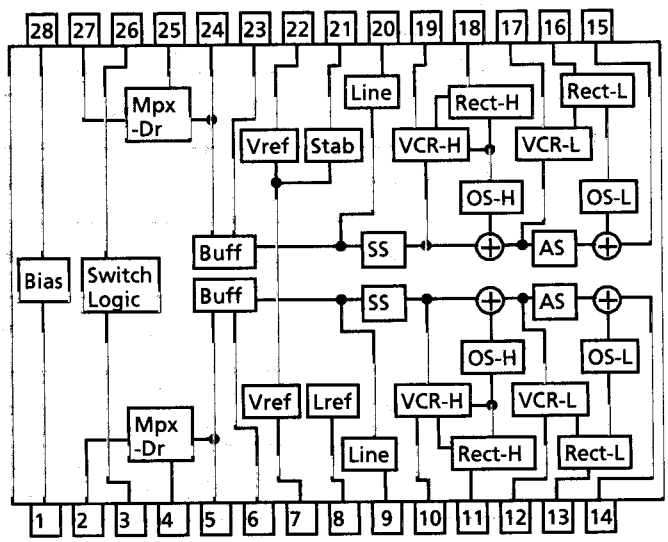
	KEY IN 1 (Pin45)	KEY IN 2 (Pin46)	KEY IN3 (Pin47)	KEY IN4 (Pin48)
SW OUT 1 (Pin39)	—	B CrO_2	METAL	—
SW OUT 2 (Pin40)	BPACK	REV REC	FWD REC	APACK
KEY OUT 1 (Pin41)	A◀	A◀◀	A▶▶	A▶
KEY OUT 2 (Pin42)	B◀	B◀◀	B▶▶	B▶
KEY OUT 3 (Pin43)	A■	B■	REC PAUSE	—
KEY OUT 4 (Pin44)	A▶▶B	DOLBY	REV. MODE	CD REC

Terminal Description

Pin NO.	Symbol	I/O	Function	Pin NO.	Symbol	I/O	Function
1	NR LED	O	Indication control for NR	33	METAL	O	Metal tape , normal speed record
2	NR LED(C)	O	Not used	34	CrO_2	O	CrO_2 tape , normal speed record
3	A S UP	O	Reel speed up control (Deck A)	35	HS NORM	O	Normal tape , high speed record
4	B S UP	O	Reel speed up control (Deck B)	36	HS METAL	O	Metal tape , high speed record
5	MUSIC IN	I	Music scan signal input	37	HS CrO2	O	CrO2 tape , high speed record
6	B F R M	O	Reel control signal for forward (Deck B)	38	HI DUB	O	It is "L" when high speed dubbing
7	B R R M	O	Reel control signal for reverse (Deck B)	39	SW O1	O	Keymatrix output for leaf switch
8	B R C M	O	Cam control signal for reverse (Deck B)	40	SW O2	O	Keymatrix output for leaf switch
9	B F C M	O	Cam control signal for forward (Deck B)	41	KEY O1	O	Key matrix output
10	A C SW2	I	Cam data input	42	KEY O2	O	Key matrix output
11	A C SW1	I	Cam data input	43	KEY O3	O	Key matrix output
12	A C SW0	I	Cam data input	44	KEY O4	O	Key matrix output
13	A.PULS IN	I	Reel pulse input from deck A	45	KEY/SW I1	I	Key matrix input
14	B C SW2	I	Cam data input	46	KEY/SW I2	I	Key matrix input
15	B C SW1	I	Cam data input	47	KEY/SW I3	I	Key matrix input
16	B C SW0	I	Cam data input	48	KEY/SW I4	I	Key matrix input
17	B.PULSE IN	I	Reel pulse input from deck B	49	RESET	I	Reset input
18	P.CONT	I	Inhibit input from system controller	50	TO VCC	--	Connected to VCC
19	GND	--	GND	51	OSC	--	Oscillation terminal
20	A F R M	O	Reel control signal for forward (Deck A)	52	OSC	--	Oscillation terminal
21	A R R M	O	Reel control signal for reverse (Deck A)	53	GND	--	GND
22	A R C M	O	Cam control signal for reverse (Deck A)	54	DCS OUT	O	Compulink output
23	A F C M	O	Cam control signal for forward (Deck A)	55	DCS IN	I	Compulink input
24	NR REC	O	It is "H" when recording with NR on	56	REC MUTE	O	Recording mute control
25	A MUTE	O	It is "H" when deck A is not playing	57	NR OFF	O	NR on/off control
26	B MUTE	O	It is "H" when deck B is not playing	58	BIAS	O	Bias on/off control
27	PLAY MU	O	Deck mute	59	REV MODE	O	Indication control for reverse mode
28	CAP CONT	O	Capstan on/off control	60	REC LED	O	Indication control for record
29	REC	O	It is "H" when recording	61	BREV LED	O	Indication control for reverse playback
30	FADE CON	O	It is "H" when recording with fade	62	BFWD LED	O	Indication control for forward playback
31	BEQ	O	It is "L" when CrO2 tape is in deck B	63	AREV LED	O	Indication control for reverse playback
32	+5V	--	Power supply	64	AFWD LED	O	Indication control for forward playback

■ AN7374K (IC201) : Dolby IC

1. Block Diagram

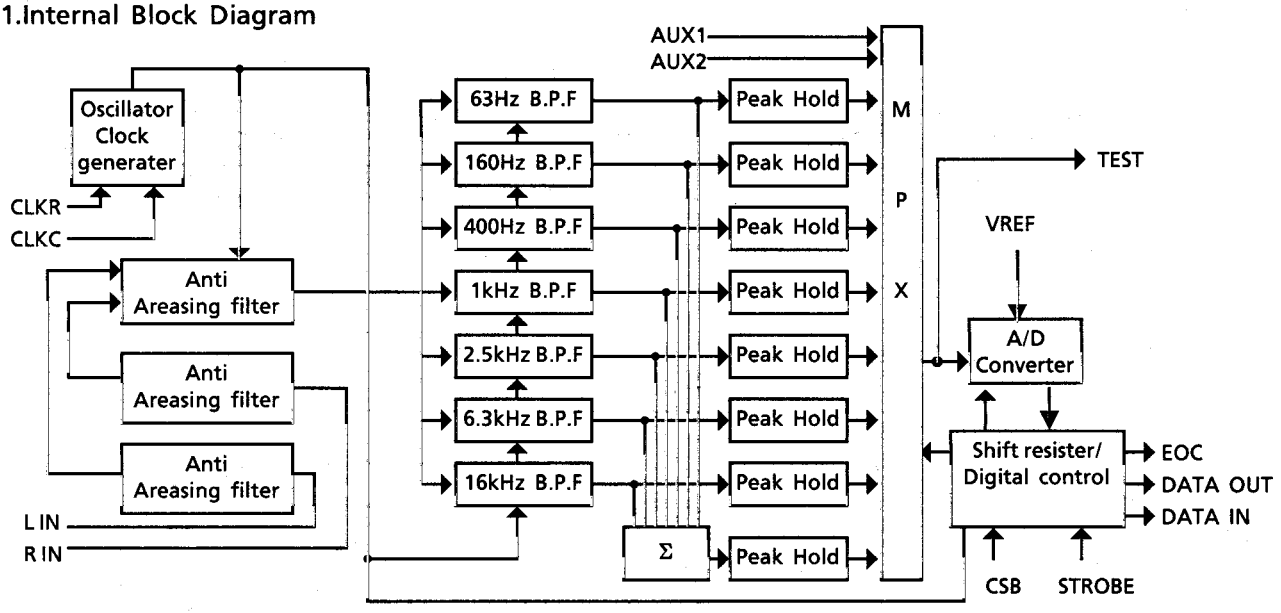


2. Pin function

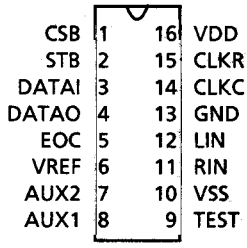
Pin No	Symbol	Function	Pin No	Symbol	Function
1	GND	GND	15	REC OUT-L	Ch. B REC-OUT
2	REC IN-R	Ch. A REC-IN	16		Ch. B LLS control signal rectifier
3	OFF/B/C	C-type/B-type/OFF NR switch	17		Ch. B LLS control resistance
4	PB IN-R	Ch. A PB-IN	18		Ch. B HLS control signal rectifier
5		Ch. A MPX filter sriver output	19		Ch. B HLS control resistance
6		Ch. A Processor input	20	PB OUT-L	Ch. B LINE -OUT
7		Ch. A reference voltage output	21		Reference voltage input
8		Reference curent generator	22		Ch. B reference voltage output
9	PB OUT-R	Ch. A LINE -OUT	23		Ch. B Processor input
10		Ch. A HLS control resistance	24		Ch. B MPX filter sriver output
11		Ch. A HLS control signal rectifier	25	PB IN-L	Ch. B PB-IN
12		Ch. A LLS control resistance	26	PB/REC	PB/REC/PBmpx Mode switch
13		Ch. A LLS control signal rectifier	27	REC IN-L	Ch. B REC-IN
14	REC OUT-R	Ch. A REC-OUT	28	Vcc	Vcc

■ XR1099(IC461) : 7-channel graphic equalizer filter with A/D converter

1.Internal Block Diagram



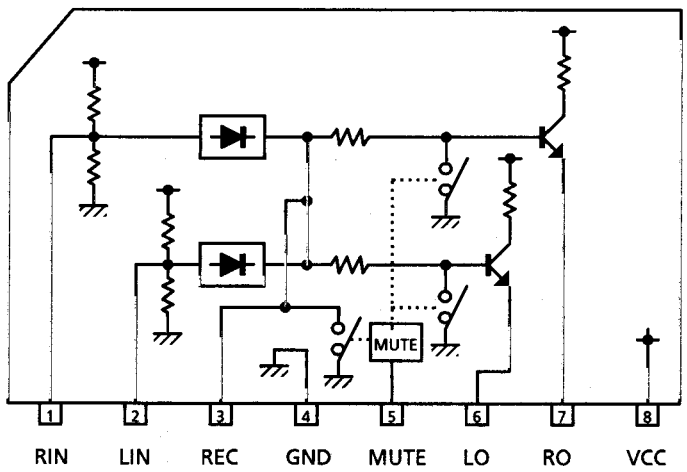
2.Terminal Layout



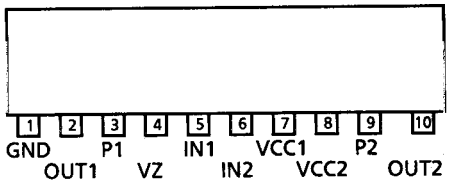
3.Terminal Description

Pin No	Symbol	I/O	Function	Pin No	Symbol	I/O	Function
1	CSB	I	Chip select	9	TEST	--	TEST Terminal
2	STB	I	Strobe signal	10	VSS	I	−5V
3	DATAI	I	Data input	11	RIN	I	Sound signal input
4	DATAO	O	Data output	12	LIN	I	Non connection
5	EOC	O	End of conversion	13	GND	--	GND
6	VREF	I	A/D converter reference voltage	14	CLKC	--	A capacitor is connected
7	AUX2	I	Non connection	15	CLKR	--	A resister is connected
8	AUX1	I	Non connection	16	VDD	--	+5V

■ BA8221AN (IC202) : ALC



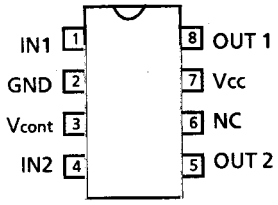
■ LB1641 (IC204~207) : DC Motor Driver

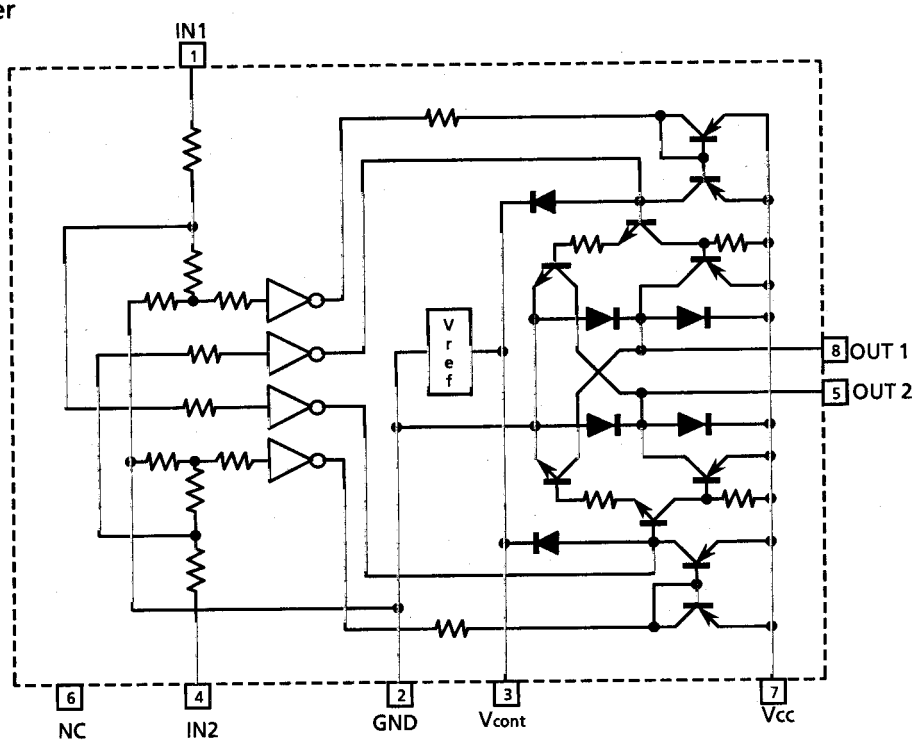


Input		Output		Mode
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	CLOCKWISE
0	1	0	1	COUNTER-CLOCKWISE
1	1	0	0	Brake

∞ : Hi impedance

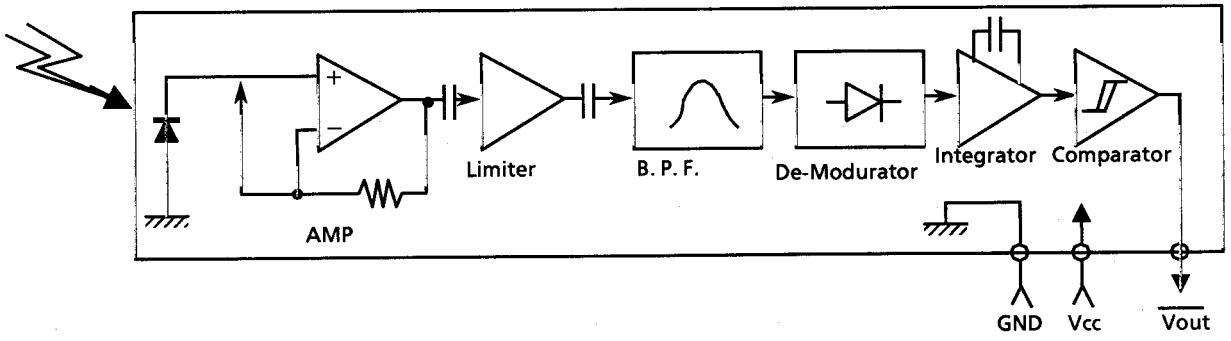
■ LB1639-CV (IC803) : Motor Driver





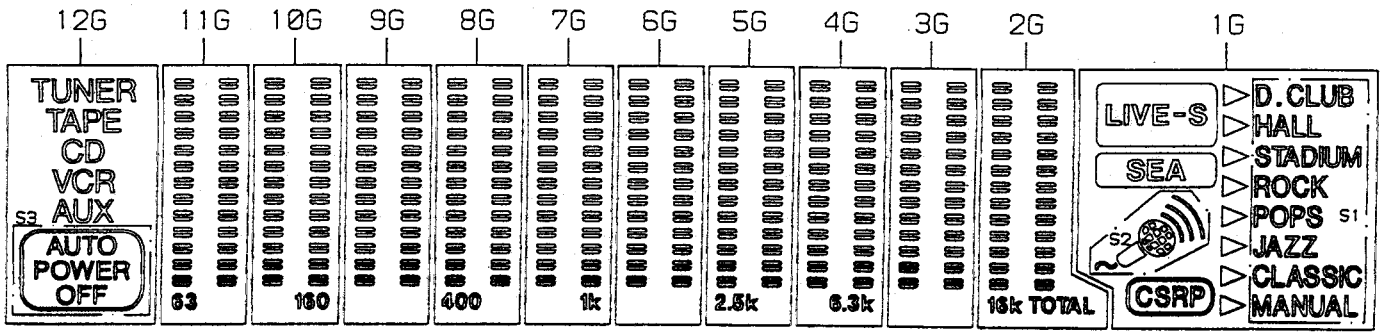
IN 1	IN 2	OUT 1	OUT 2	MOTOR
H	L	H	L	CLOCKWISE
L	H	L	H	COUNTER-CLOCKWISE
H	H	OFF	OFF	WAITING
L	L	OFF	OFF	WAITING

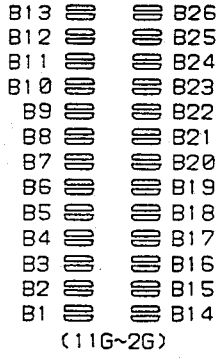
■ SPS-420-1 (IC902) : Remocon Module IC



Internal Connections of the FL Display

■ ELU0001-195 : FL901





Pin Connection

PIN NO.	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CONNECTION	P24	P23	P22	P21	P20	P19	P18	P17	P16	P15	P14	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	G	G	G	G	G	G	G	G	G	G	G	G	G	G	NP	NP	F1	F2

PIN NO.	57	56	55	54	53	52	51
CONNECTION	F2	F2	NP	NP	P7	P6	P5

NOTE
1) F1,F2 --- Filament
2) NP ------ No pin
3) NX ------ No extend pin
4) DL ------ Datum Line
5) 1G~12G --- Grid

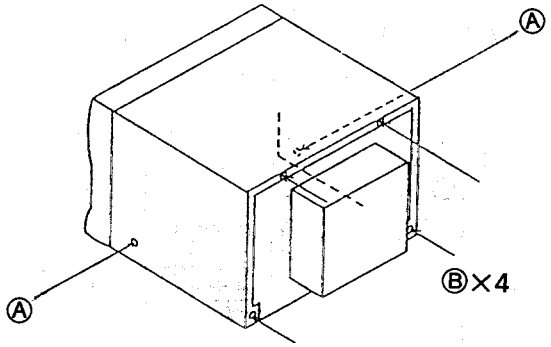
Anode Connection

	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	TUNER	B13	B13	B13	B13	B13	B13	B13	B13	B13	B13	LIVE-S
P2	TAPE	B12	B12	B12	B12	B12	B12	B12	B12	B12	B12	SEA
P3	CD	B11	B11	B11	B11	B11	B11	B11	B11	B11	B11	S2
P4	VCR	B10	B10	B10	B10	B10	B10	B10	B10	B10	B10	CSRP
P5	AUX	B9	B9	B9	B9	B9	B9	B9	B9	B9	B9	▷(D.CLUB)
P6	S3	B8	B8	B8	B8	B8	B8	B8	B8	B8	B8	▷(HALL)
P7	–	B7	B7	B7	B7	B7	B7	B7	B7	B7	B7	▷(STADIUM)
P8	–	B6	B6	B6	B6	B6	B6	B6	B6	B6	B6	▷(ROCK)
P9	–	B5	B5	B5	B5	B5	B5	B5	B5	B5	B5	▷(POPS)
P10	–	B4	B4	B4	B4	B4	B4	B4	B4	B4	B4	▷(JAZZ)
P11	–	B3	B3	B3	B3	B3	B3	B3	B3	B3	B3	▷(CLASSIC)
P12	–	B2	B2	B2	B2	B2	B2	B2	B2	B2	B2	▷(MANUAL)
P13	–	B1	B1	B1	B1	B1	B1	B1	B1	B1	B1	S1
P14	–	B26	B26	B26	B26	B26	B26	B26	B26	B26	B26	–
P15	–	B25	B25	B25	B25	B25	B25	B25	B25	B25	B25	–
P16	–	B24	B24	B24	B24	B24	B24	B24	B24	B24	B24	–
P17	–	B23	B23	B23	B23	B23	B23	B23	B23	B23	B23	–
P18	–	B22	B22	B22	B22	B22	B22	B22	B22	B22	B22	–
P19	–	B21	B21	B21	B21	B21	B21	B21	B21	B21	B21	–
P20	–	B20	B20	B20	B20	B20	B20	B20	B20	B20	B20	–
P21	–	B19	B19	B19	B19	B19	B19	B19	B19	B19	B19	–
P22	–	B18	B18	B18	B18	B18	B18	B18	B18	B18	B18	–
P23	–	B17	B17	B17	B17	B17	B17	B17	B17	B17	B17	–
P24	–	B16	B16	B16	B16	B16	B16	B16	B16	B16	B16	–
P25	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	–
P26	–	B14	B14	B14	B14	B14	B14	B14	B14	B14	B14	–
P27	–	63	160	–	400	1k	–	2.5k	6.3k	–	16k TOTAL	–

Disassembly Procedures

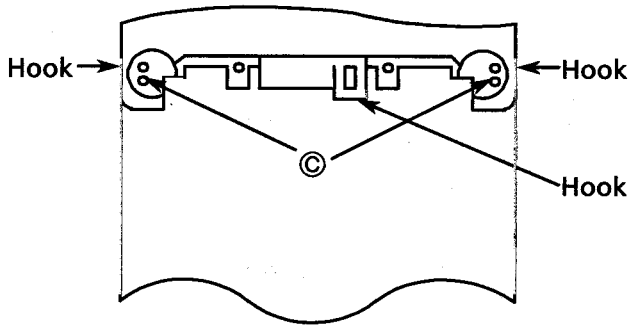
(1) Removing the top cover

1. Remove 6 screws Ⓐ and Ⓑ fastening the rear and sides of the top cover to remove the cover.



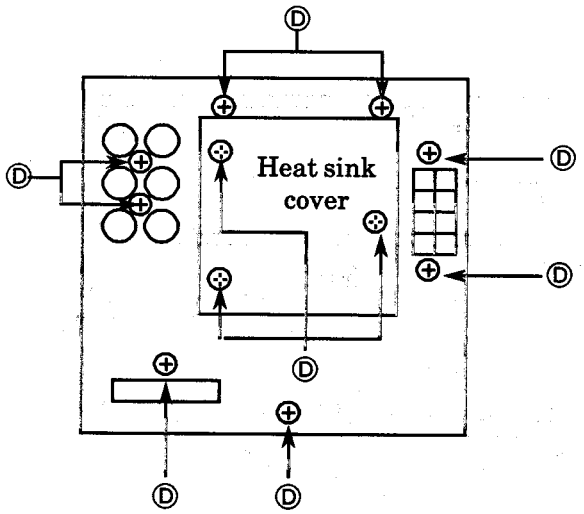
(2) Removing the Front panel assembly

1. Remove the top cover. (Refer to Item 1)
2. Pull out the main volume knob and remove the nut fixing the main volume.
3. Disconnect the connectors JB951, JB221, P905 and J511 .
4. Remove 2 screws Ⓒ and 3 hooks fastening the assembly with chassis to remove the assembly.



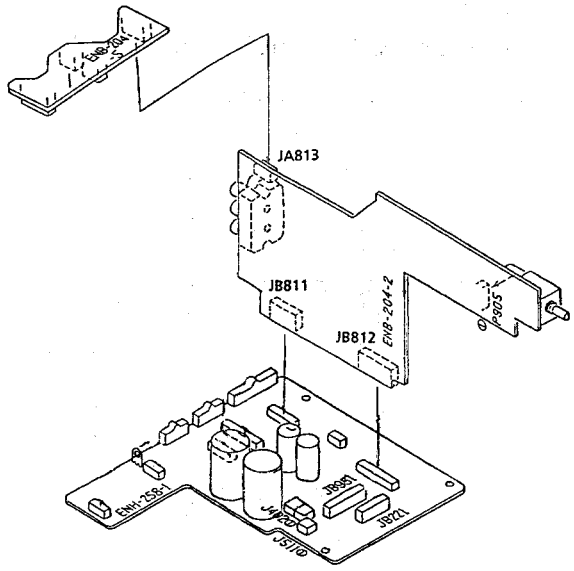
(3) Removing the rear panel

1. Remove the top cover. (Refer to Item 1)
2. Remove 2 screws Ⓓ to remove the heat sink cover.
3. Remove the heat sink cover.
4. Remove 9 screws Ⓓ fixing the rear panel to remove it.



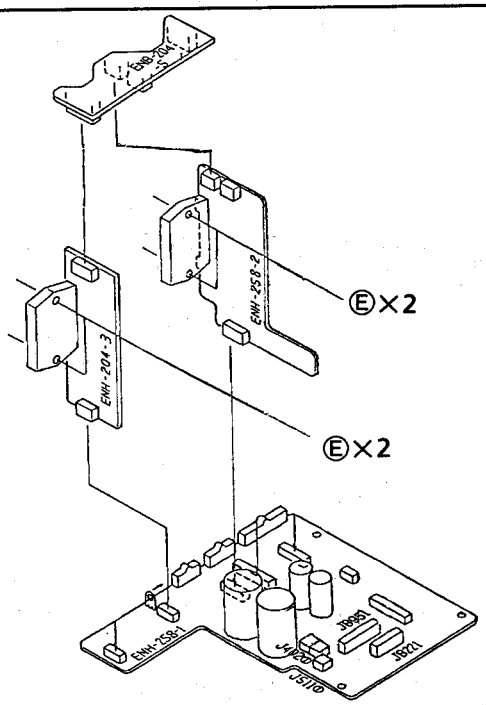
(4) Removing the Main volume & External input circuit board. (ENB-204-2)

1. Remove the front panel assembly and rear panel. (Refer to Item 2 and 3)
2. Remove the junction circuit board (ENB-204-5).
3. Disconnect the connectors JB811 and JB812 to disassemble Main volume & External input circuit board.

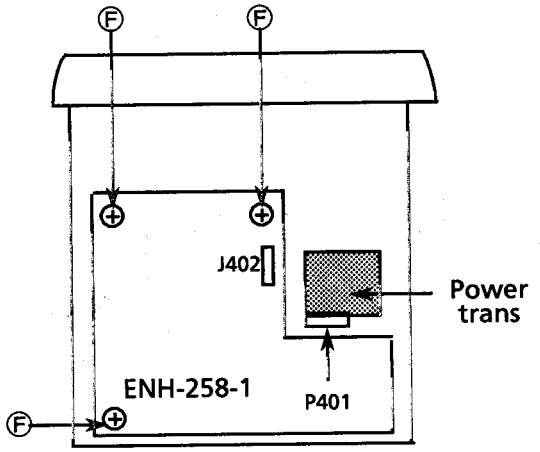


Ⓐ .. SDSG3006M Ⓑ ... GBSG3008CC Ⓒ ... SBST3008M Ⓓ ... E73273-003

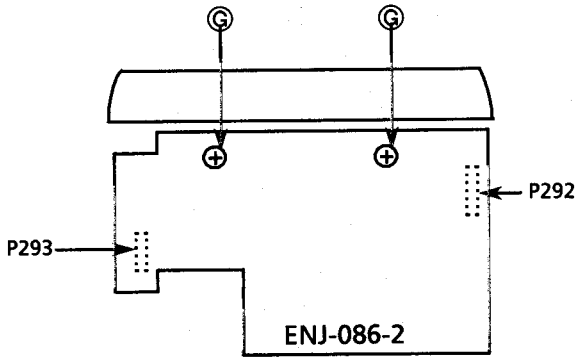
(5) Removing the Power IC
1. Remove the Main volume & External input circuit board. (Refer to Item 4)
2. Remove the power amp. circuit board (ENB-204-3,ENH-258-2) with the heat sink.
3. Remove the each 2 screws Ⓔ fixing both the power amp. ic.
4. Unsolder it.



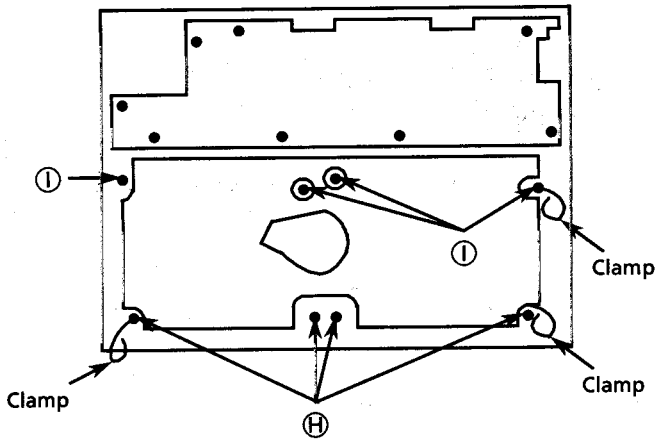
(6) Removing the Main circuit board (ENH-258-1)
1. Remove the power IC. (Refer to Item 5)
2. Remove the Speaker terminal circuit board (ENB-204-4).
3. Disconnect the connectors J402 and P401
4. Remove 3 screws Ⓕ fixing the circuit board.
5. Remove the Main circuit board.



(7) Removing the Deck control circuit board (ENJ-086-2)
1. Remove the front panel assembly. (Refer to Item 2)
2. Disconnect the connectors P292 and P293.
3. Remove the 2 screws Ⓖ fixing the circuit board.
4. Remove the Deck control circuit board.

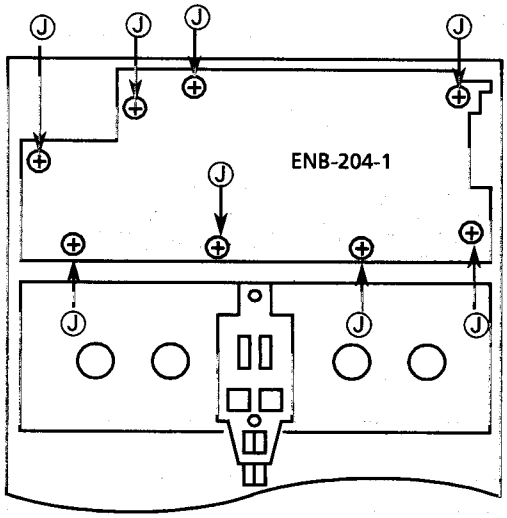


(8) Removing the mechanism assembly
1. Remove the Deck control circuit board. (Refer to Item 7)
2. Remove the 8 screws Ⓗ and Ⓘ to remove the assembly.

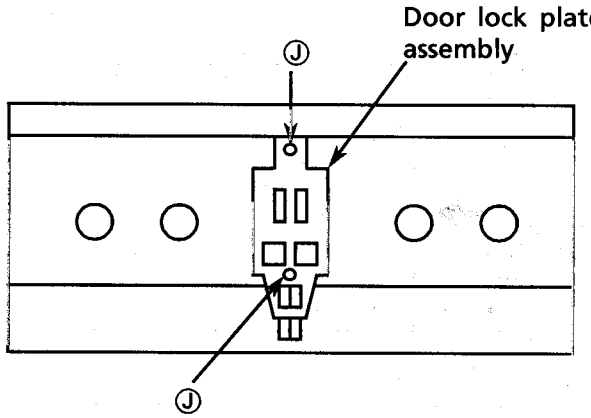


Ⓔ SBSG3014CC Ⓕ GBSG3008CC Ⓖ SPST2604Z Ⓗ SBST3006Z Ⓘ SBSF3008Z

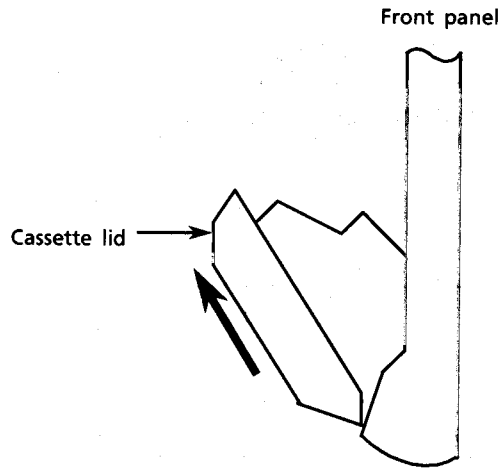
(9) Removing the front circuit board (ENB-204-1)
1. Remove the mechanism assembly. (Refer to Item 8)
2. Remove the jog volume knob, twin bass knob and balance knob.
3. Remove 8 screws Ⓙ to remove the front circuit board.



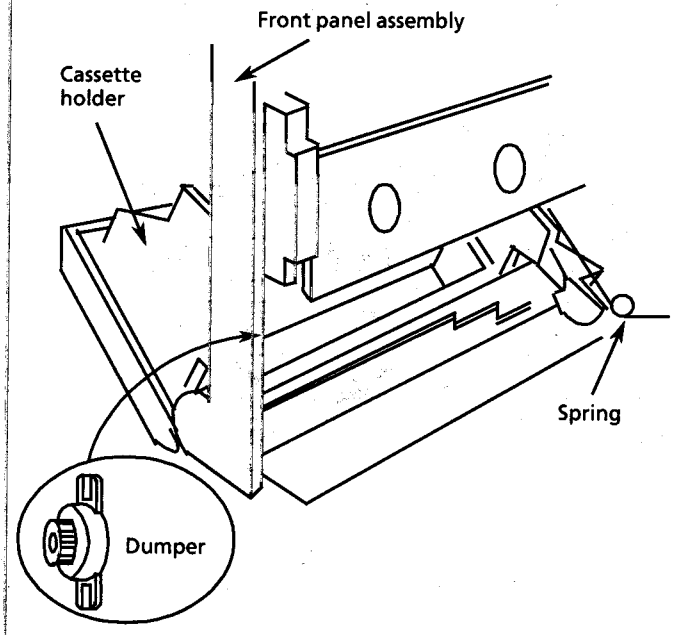
(10) Removing the door lock plate assembly
1. Remove the mechanism assembly. (Refer to Item 8)
2. Remove the 2 screws Ⓙ fixing the assembly.
3. Open the cassette doors to remove the assembly.



(11) Removing the cassette lids
1. Push the eject button to open the cassette doors.
2. Slide the lids up to remove them.

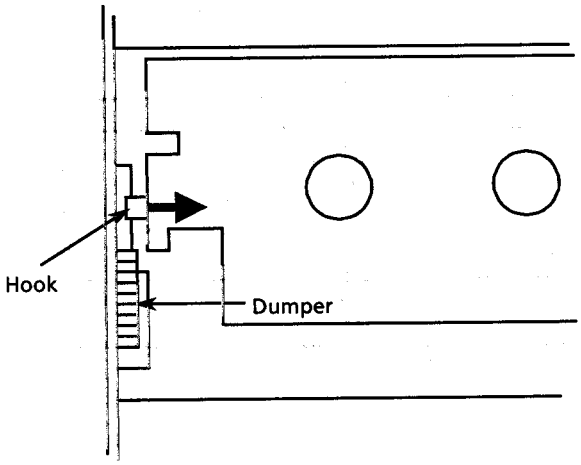


(12) Removing the Cassette holder
1. Remove the mechanism assembly. (Refer to Item 8)
2. Open the cassette door.
3. Remove the spring.
4. Remove the cassette holder.

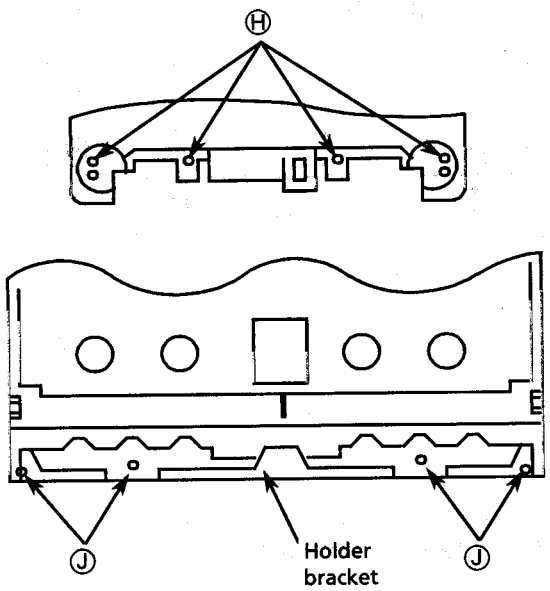


Ⓙ .. SDSF2608Z

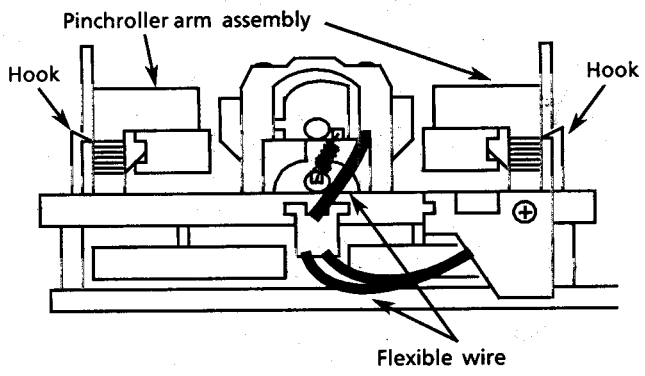
(13) Removing the dumpers
1. Remove the mechanism assembly. (Refer to Item 8)
2. Remove the cassette holder. (Refer to Item 12)
3. Press the hook and release it to remove the dumper. (See an arrow)



(14) Removing the Front SW circuit board (ENB-204-6)
1. Remove the cassette holders. (Refer to Item 12)
2. Remove the door lock plate assembly. (Refer to Item 10)
3. Remove the 4 screws Ⓗ to remove the holder bracket fixing the SW circuit board.
4. Remove 4 screws Ⓙ to remove the circuit board.

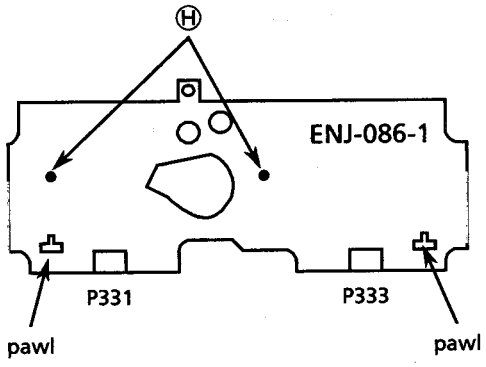


(15) Removing the pinchroller arm assembly
1. Remove the mechanism assembly. (Refer to Item 8)
2. Release the hook holding the assembly to remove it.



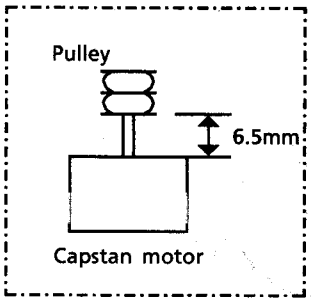
Bottom view of the mechanism

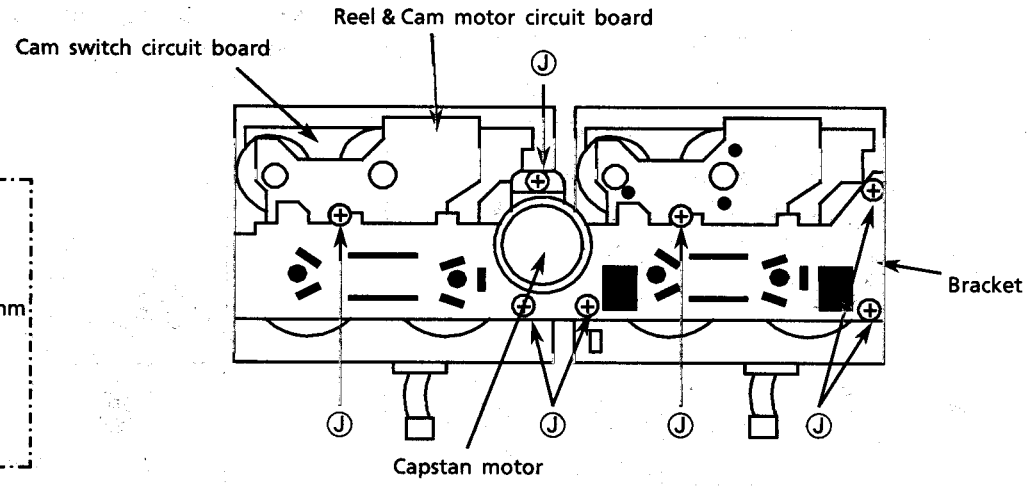
(16) Removing the deck audio circuit board (ENJ-086-1)
1. Remove mechanism assembly. (Refer to Item 8)
2. Disconnect P331 and P333.
3. Remove the 2 screws Ⓗ to remove the circuit board. (Pay attention to the pawls.)



Ⓗ .. SBST3006Z Ⓙ ... SDSF2608Z

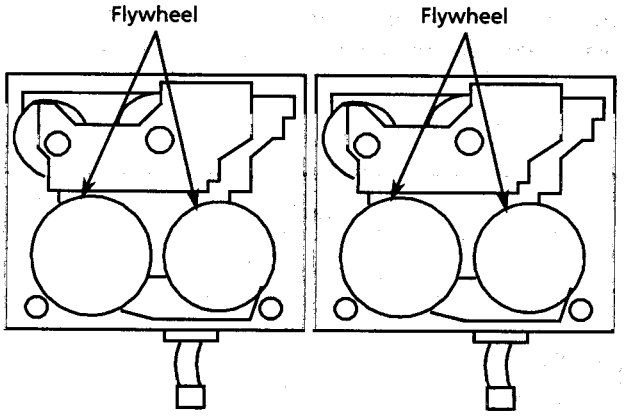
(17) Removing the capstan motor
1. Remove the deck audio circuit board. (Refer to Item 16)
2. Remove the 7 screws Ⓙ fixing the bracket.
3. Release the hooks holding the bracket to remove the bracket with the capstan motor.
4. Remove the 2 screws fixing the motor to remove it.





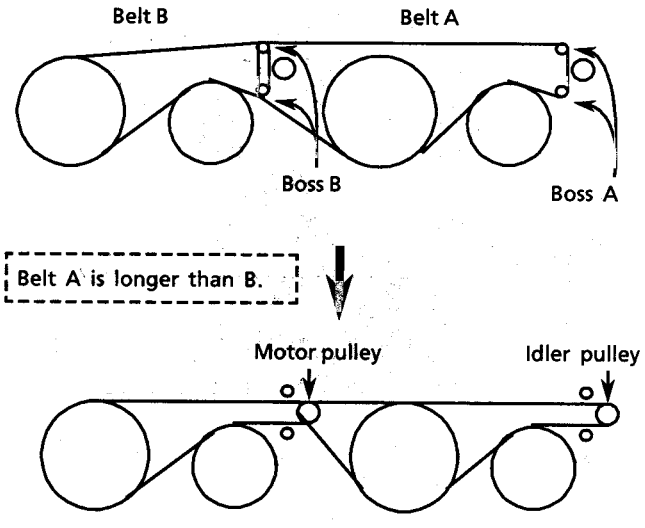
Behind of the mechanism

(18) Removing the Flywheels
1. Remove the deck audio circuit board. (Refer to Item 16)
2. Remove the 7 screws Ⓙ and release the hooks holding the bracket to remove the bracket with the capstan motor.
3. Remove the flywheel.



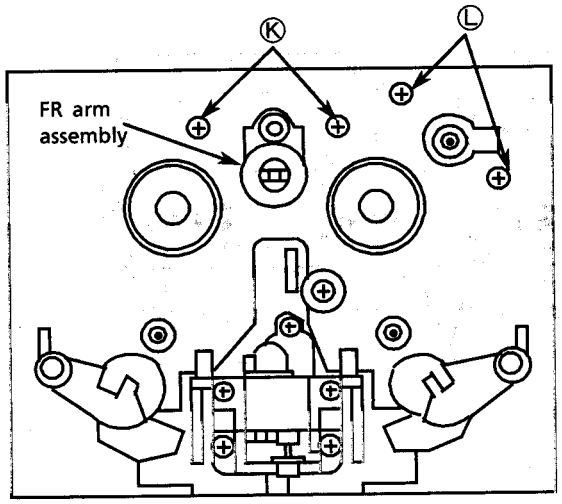
Behind of the mechanism

(19) How to install the belts
1. Install the belts as shown in the figure below.
   When putting the belts, put the belt B first.
2. Install the bracket with the capstan motor to put the belts on the pulleys.



Ⓙ .. SDSF2608Z

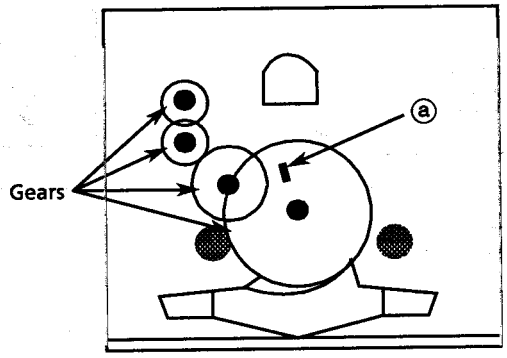
(20) Removing the reel & cam motor
1. Remove the flywheel. (Refer to Item 18)
2. Remove the screws Ⓚ and Ⓛ fixing the motors to remove the reel & cam motor circuit board.
3. Unsolder the motors to remove them.

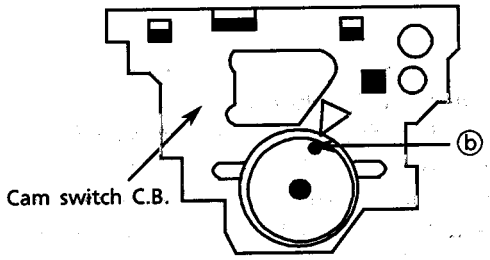


Front view of the mechanism

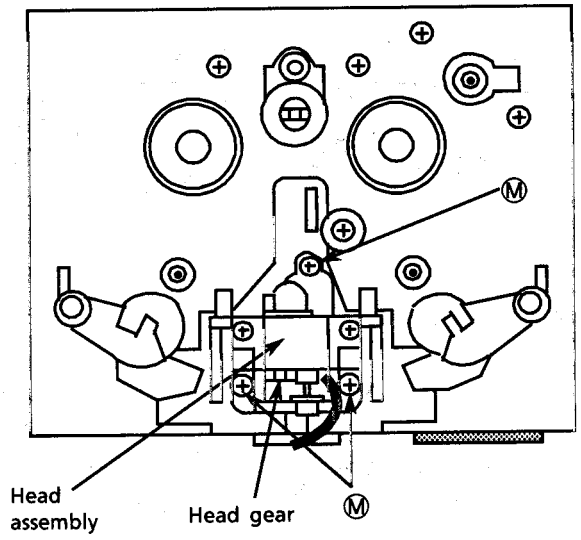
(21) Removing the cam switch circuit board
1. Remove the flywheel. (Refer to Item 18)
2. Remove the reel & cam motor circuit board.
3. Release the hook holding the cam switch circuit board and remove the screw to remove it.

※ When installing the cam switch circuit board, assemble the circuit board so that the part ⓐ meets part ⓑ.



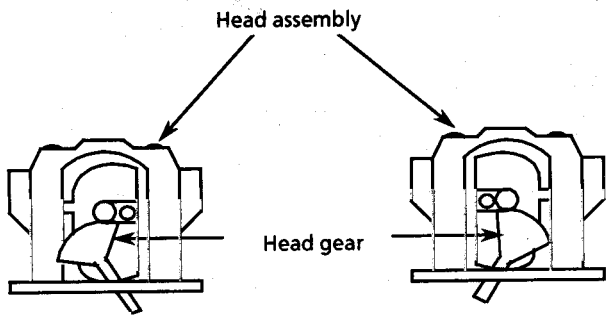


(22) Removing the head assembly
1. Remove the mechanism assembly. (Refer to Item 8)
2. Disconnect the connector P331 or P333 on the deck audio circuit board. (Refer to Item 16)
3. Remove the 3 screws Ⓜ fixing the head assembly to remove it.



Front view of the mechanism

(23) Installing the head assembly
The direction of the head is changed with the head gear. When servicing, install the head gear according to the direction of the head.



Ⓚ .. VKZ4705-001 Ⓛ ... VKZ4705-002 Ⓜ ... SDST2004Z

Adjustment Procedures (Cassette Deck)

1. Measuring instruments

Audio frequency signal generator (0dbs output at the 600 ohm output terminal from 50Hz to 20KHz)
Electronic voltmeter
Frequency counter
Wow & Flutter meter
Distortion Meter with band pass filter
Attenuator (600 ohm impedance)
A resistor with 600Ω

Standard Tape **0dBs=0.775V**

Tape No.	Frequency	Level (Wow & Fkutter)	Purpose
VTT-703L	10kHz	−10dBs	Head azimuth , Frequency Response
VTT-712	3000Hz	0dBs 0.025%WRMS	Tape Speed , Wow & Flutter
VTT-724	1kHz	−4dBs	Standard Level
TMT-6447	—	—	Blunk Skip
TMT-6247 , TMT-6237	—	—	Music Scan
TMT-7046	—	—	Recording standard Normal : UR
AC-712	—	—	Recording standard METAL : MA
AC-513	—	—	Recording standard CrO_2 : SA
TW-2111, TW-2121	—	—	Forward / reverse play torque measuring
TW-2231	—	—	Feed forward / rewind torque measuring
C-120 Tape	—	—	Comfirming the tape running

2. Adjustment and repairing the mechanism

Item	Adjustment method	Standard value	Remarks
Head azimuth	Deck A 1. Connect an electronic voltmeter to the DOLBY TP(figure 3) to playback VTT-703L. 2. Adjust screw Ⓐ so that the indication of the voltmeter becomes maximum when PLAY (▶) is pressed. 3. Adjust screw Ⓑ so that the indication of the voltmeter becomes maximum when PLAY (◀) is pressed. Deck B 4. Adjust screw Ⓒ so that the indication of the voltmeter becomes maximum when PLAY (▶) is pressed. 5. Adjust screw Ⓓ so that the indication of the voltmeter becomes maximum when PLAY (◀) is pressed. 6. After making the adjustment,apply screw lock to prevent screws Ⓐ, Ⓑ, Ⓒ and Ⓓ coming loose .	Maximum	1. **Refer to figure 1.** 2. When the specified characteristic cannot be obtained because of head wear, excessive magnetization, etc., replace the head assembly and adjust the head azimuth. Also, perform the electric adjustment. 3. When there is the difference of more than 3 ~ 4 dB between left and right output levels, replace the head assembly to avoid complaints.
Playback torque	1. Measure the torque in the playback mode by the torqu meter.	26 ~ 62 g-cm	When the standard torque cannot be obtained, replace the FR arm assembly or motor.
Fast forward torque	1. Measure the torque in the fast forward mode by the torqu meter.	80 ~ 170 g-cm	When the standard torque cannot be obtained,replace the FR arm assembly or motor.
Rewind torque	1. Measure the torque in the rewind mode by the torqu meter.	80~ 170 g-cm	When the standard torque cannot be obtained, replace the FR arm assembly or motor.
Wow & flutter	1. Connect the wow & flutter meter to the DOLBY TP(figure 3) and play back VTT-712 . 2. Its reading should be within 0.2% (WTD).	—	As a complaint may occur if the wow & flutter fluctuates by 0.1% even though it is allowed in the standard, repairing is required.

Deck A **Figure 1** Deck B

3. Electrical Adjustments (Make the following adjustments after adjusting the head azimuth.)

In principle, the adjustments should be made in the following sequence.

Set the NR switch to OFF and the BEAT CUT switch to "1".

Adjustments marked with an asterisk (*) should always be made after the head is replaced **0dBs=0.775V.**

Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
Tape Speed	1. Connect a frequency counter to the DOLBY TP(figure 3) and play back VTT-712. 2. Normal speed Adjustment 1) Mechanism B Play back deck B to adjust the semi-fixed resistor VR201 on ENJ-086-2. 2) Mechanism A Play back deck A to confirm that the difference between deck A and deck B is within ±51Hz. 3. High-speed check 1) Mechanism A Play back deck A check 6,000Hz±600Hz.	VR201 Check Check	3,000 Hz ±10Hz 6,000Hz ±600Hz	1) Adjust the normal speed first, and perform the high speed adjustment.
Standard level (Playback Level)	1. Connect an electronic voltmeter to the DOLBY TP (figure 3). Play back VTT-724 (1 kHz : −4dBs) to adjust the semi-fixed resistors.	**Deck A** L: VR301 R: VR302 **Deck B** L: VR303 R: VR304	−5.5dBs (411mV) ±1dB	1) The playback level varies when the head is replaced so should be adjusted. Use an electronic voltmeter with an impedance of 100 kΩ or more.
Playback Frequency Response	1. Connect an electronic voltmeter to the DOLBY TP (figure 3). 2. Play VTT-703L (10kHz : −10dBs) and adjust semi-fixed resistors to obtain the standard values.	**Deck A** L: VR305 R: VR306 **Deck B** L: VR307 R: VR308	−11.5dBs (206mV) ±3dB	—
Recording Bias Frequency	1. Connect a frequency counter to the BIAS TP(figure 3), and perform a recording to adjust bias frequency.	L301	100 kHz ±6 kHz	Set the BEAT CUT SWITCH to "1".
Record / Play Frequency Response (Bias current)	1. Supply 1kHz and 12.5kHz with 30mV signals to AUX/VCR terminals respectively to record them. 2. Connect an electronic voltmeter to the DOLBY TP (figure 3) to confirm the recorded values. 3. If the values are not satisfied, adjust the semi-fixed resistors and record the signal again to confirm the recorded values.	L: VR309 R: VR310	0±2 dB for 12.5 kHz with 1 kHz as the standard.	**Refer to figure 2 below.** 1) The recording and playback frequency response of a cassette deck are adjusted by adjusting the bias. 2) Perform the adjustment with normal tape and confirm that the values are within the range for metal tape.

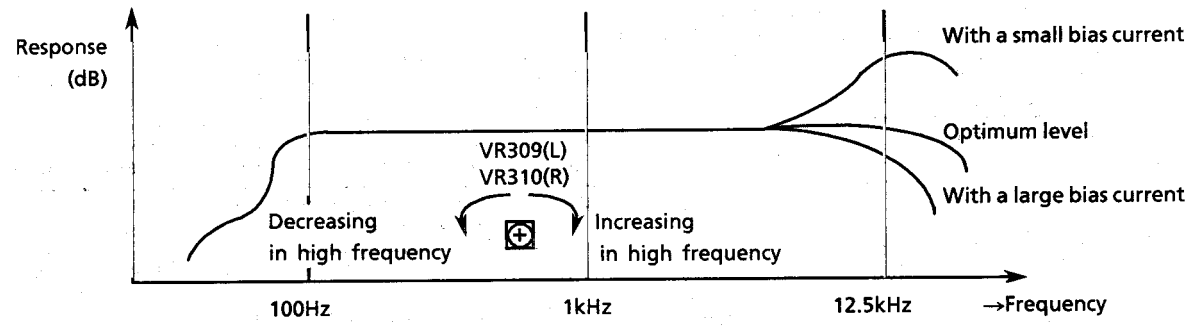


Figure 2

Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
Record / Playback Sensitivity	1. Input a 1 kHz (−8.2dBs: 300mV) signal to AUX / VCR terminals and record it on the left and right channels . 2. Connect an electronic voltmeter to the DOLBY TP (figure 3) to confirm the values . 3. If the values are not satisfied , adjust the semi-fixed resistors and record the signals again to confirm the values.	L : VR311 R : VR312	−5.5dBs (411mV)	Adjust with normal tape and make sure that the left / right level difference is 1.0dB or less
Erase ratio check	1. Record a music source using metal tape. 2. Rewind and erase the recorded section. 3. Comfirm nothing can be heard.	—	—	—
Auto-stop check	Make sure to operate AUTO STOP at the end of tape running and not to operate on the way of the playing.	—	—	—
Music Scan	1. Make sure not to work the music scanning operation at the start of tape wind using TMT-6237. 2. Make sure to work the music scanning operation at the end of tape wind using TMT-6247.	—	—	—

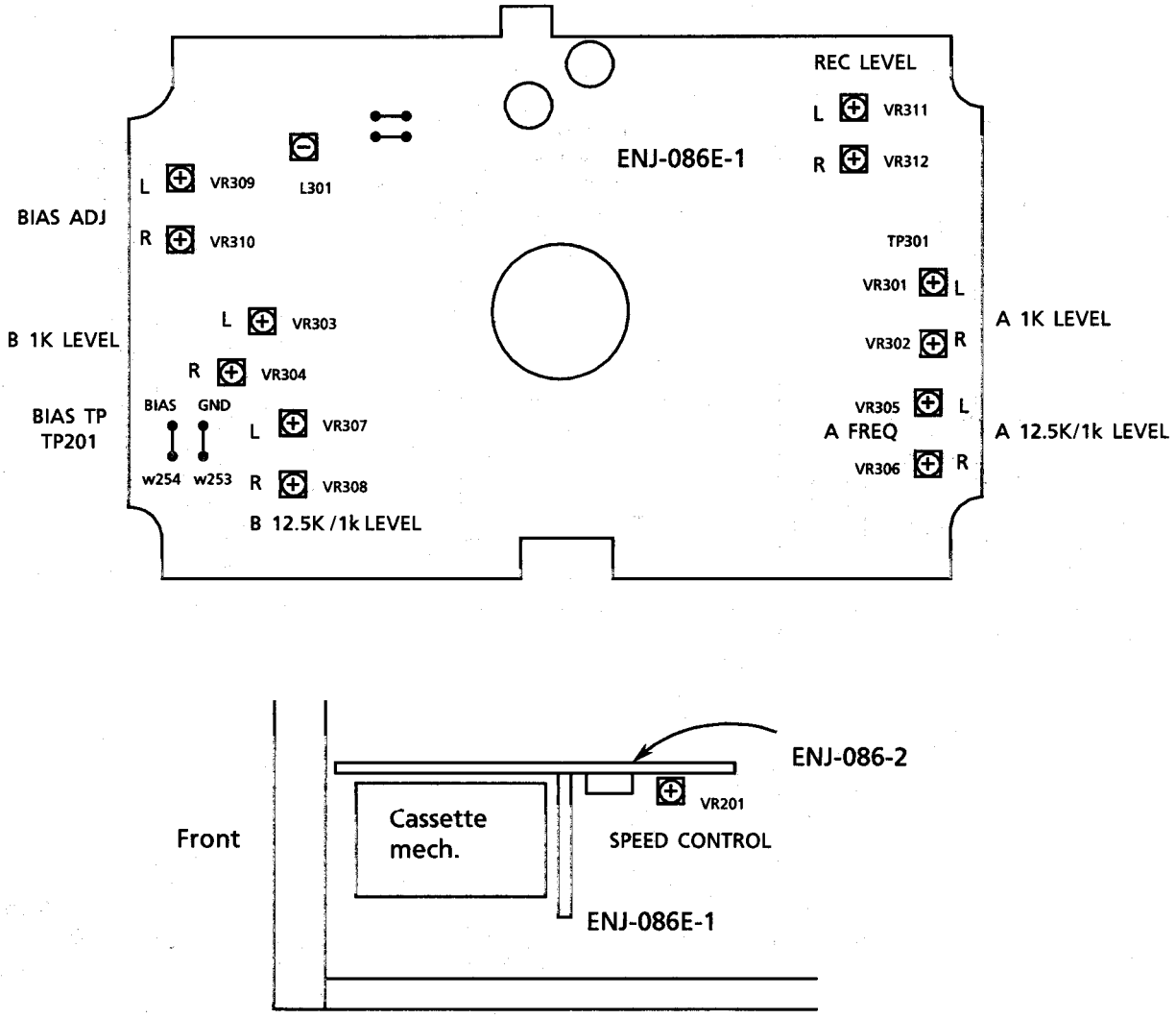
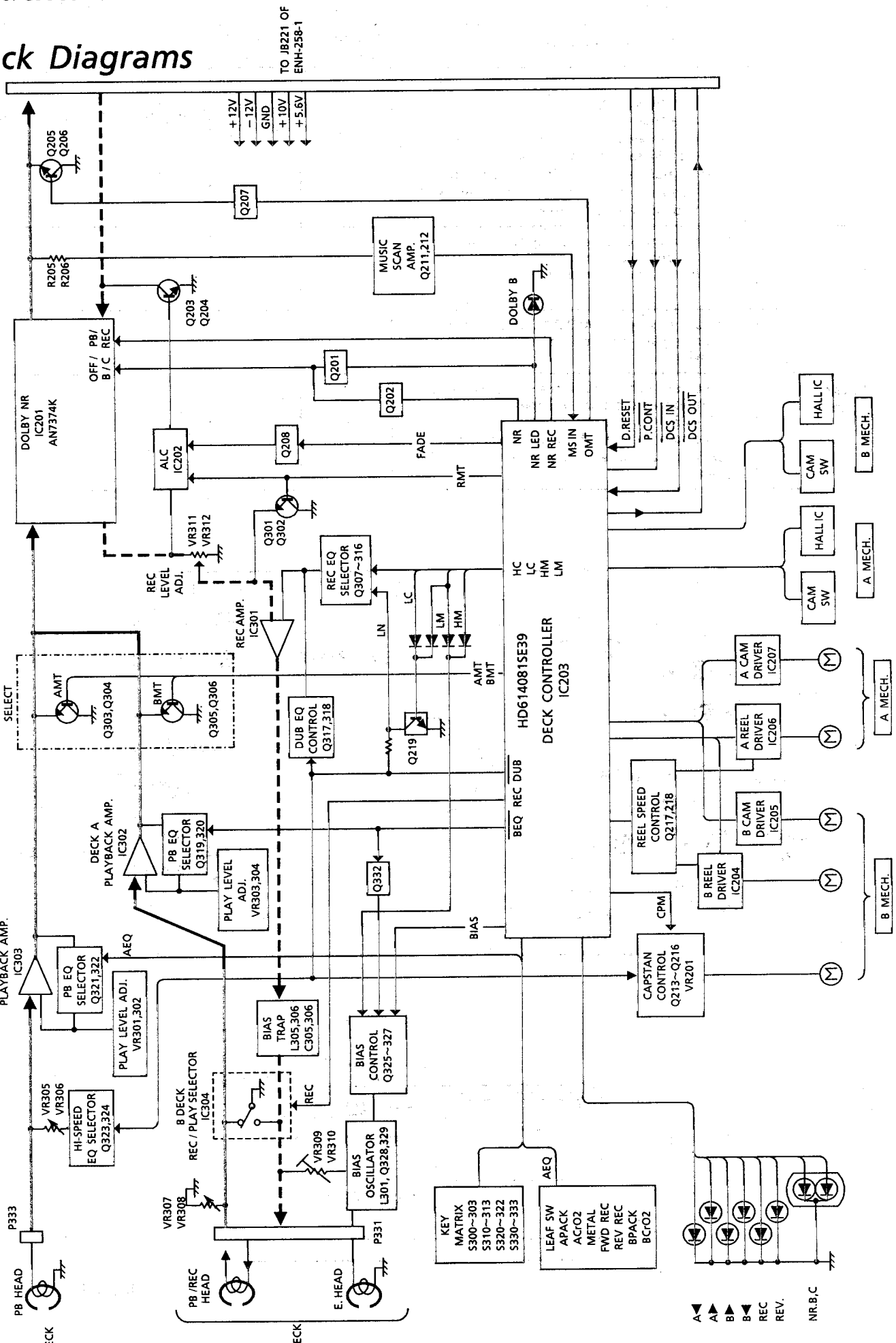
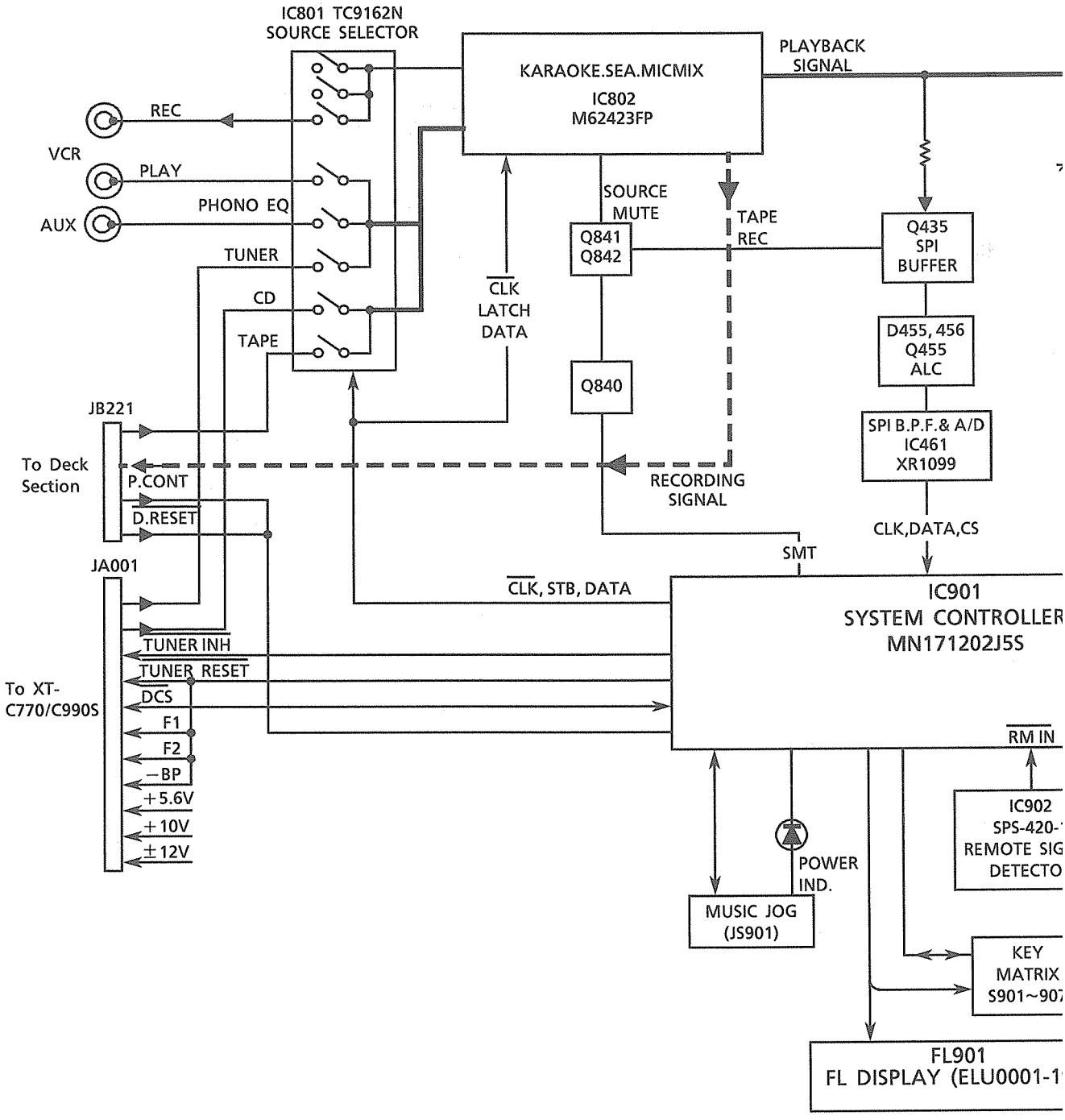


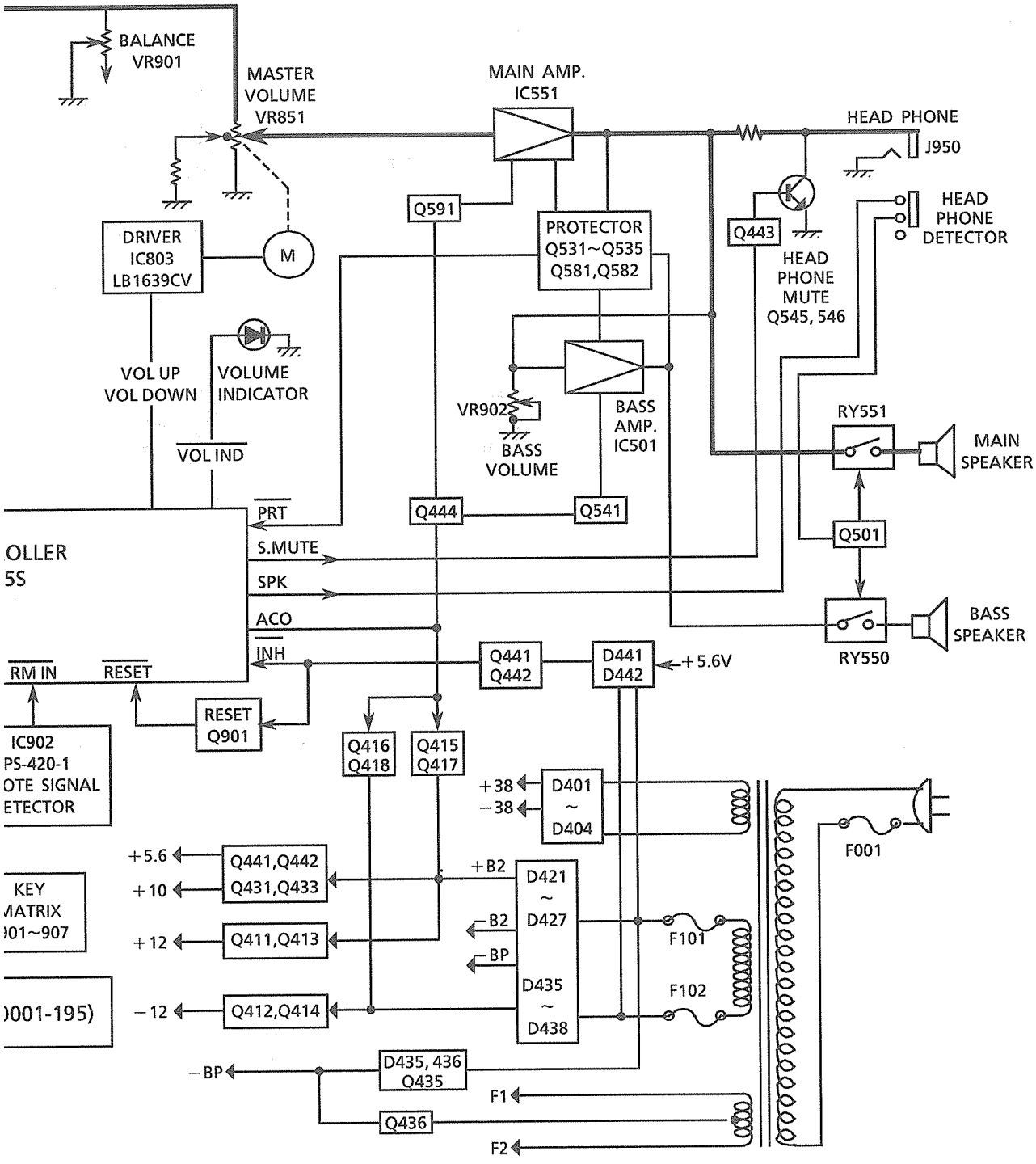
Figure 3

Block Diagrams



System Control Section

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MASTER
VOLUME
VR851
MAIN AMP.
IC551
HEAD PHONE
J950
HEAD
PHONE
DETECTOR
Q591
PROTECTOR
Q531~Q535
Q581,Q582
Q443
HEAD
PHONE
MUTE
Q545, 546
DRIVER
IC803
LB1639CV
M
VOL UP
VOL DOWN
VOLUME
INDICATOR
VOL IND
VR902
BASS
VOLUME
BASS
AMP.
IC501
RY551
MAIN
SPEAKER
PRT
Q444
Q541
Q501
S.MUTE
SPK
ACO
INH
BASS
SPEAKER
RY550
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Q442
D441
D442
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RESET
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Q416
Q418
Q415
Q417
IC902
PS-420-1
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−38
D401
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D404
F001
+5.6
+10
Q441,Q442
Q431,Q433
+B2
D421
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D427
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MATRIX
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Q411,Q413
−B2
−BP
F101
D435
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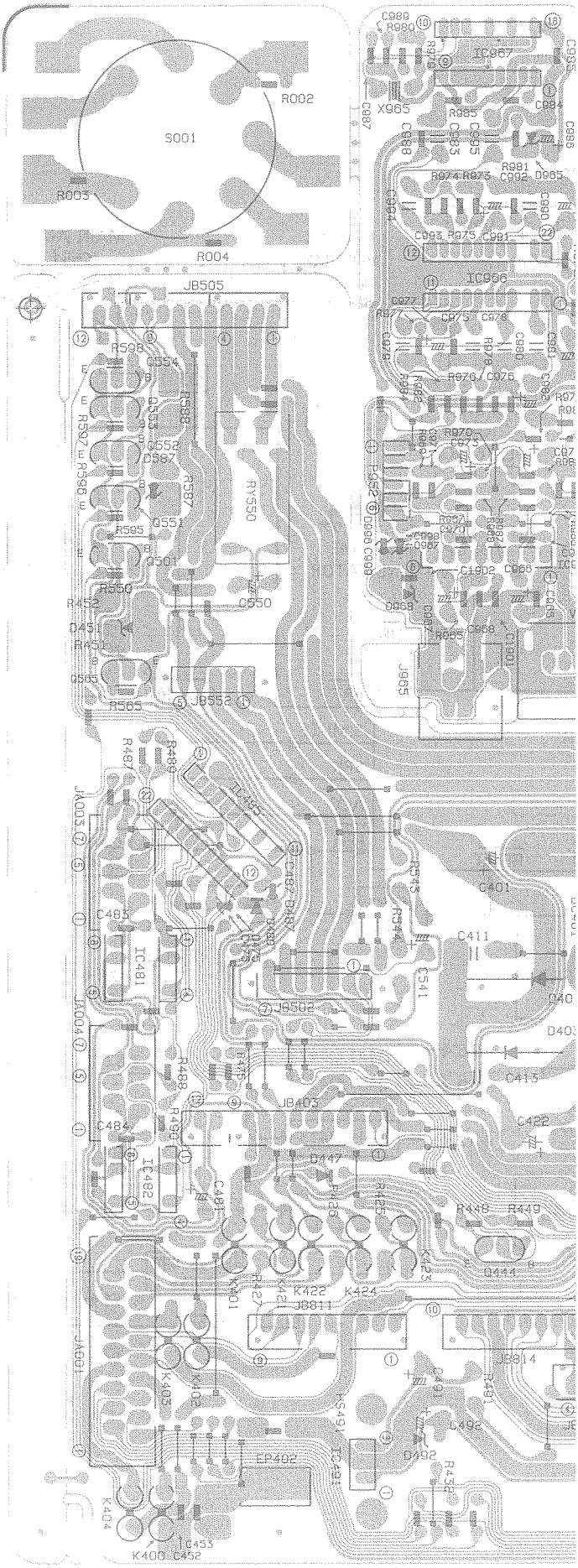
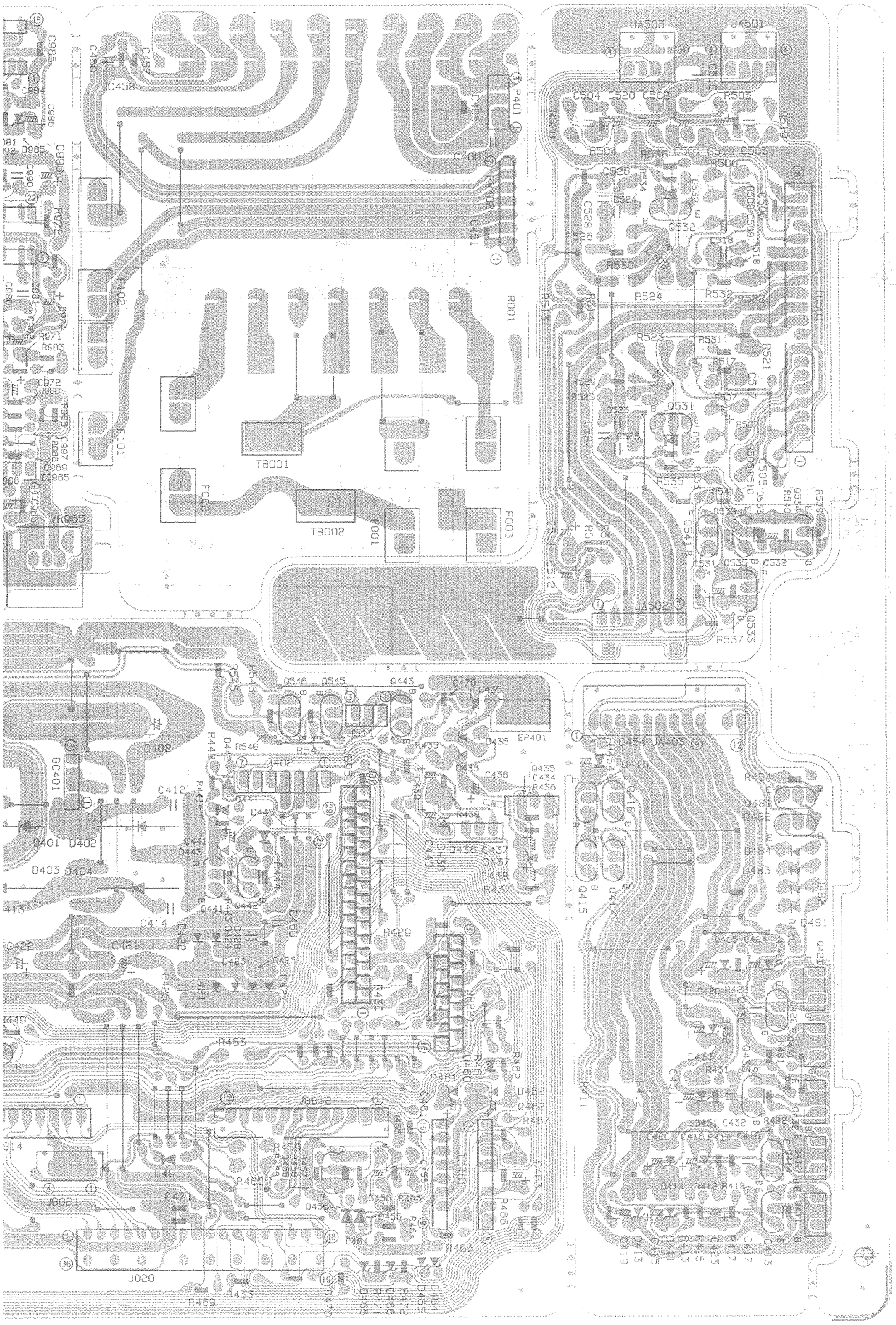
D438
F102
)001-195)
−12
Q412,Q414
−BP
D435, 436
Q435
F1
Q436
F2

Printed Circuit Board

Power Supply P.C.Board (ENH-258)

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R837
R838
R839
R840
R841
R842
R843
R844
R845
R846
R847
R848
R849
R850
R851
R852
R853
R854
R855
R856
R857
R858
R859
R860
R861
R862
R863
R864
R865
R866
R867
R868
R869
R870
R871
R872
R873
R874
R875
R876
R877
R878
R879
R880
R881
R882
R883
R884
R885
R886
R887
R888
R889
R890
R891
R892
R893
R894
R895
R896
R897
R898
R899
R900
R901
R902
R903
R904
R905
R906
R907
R908
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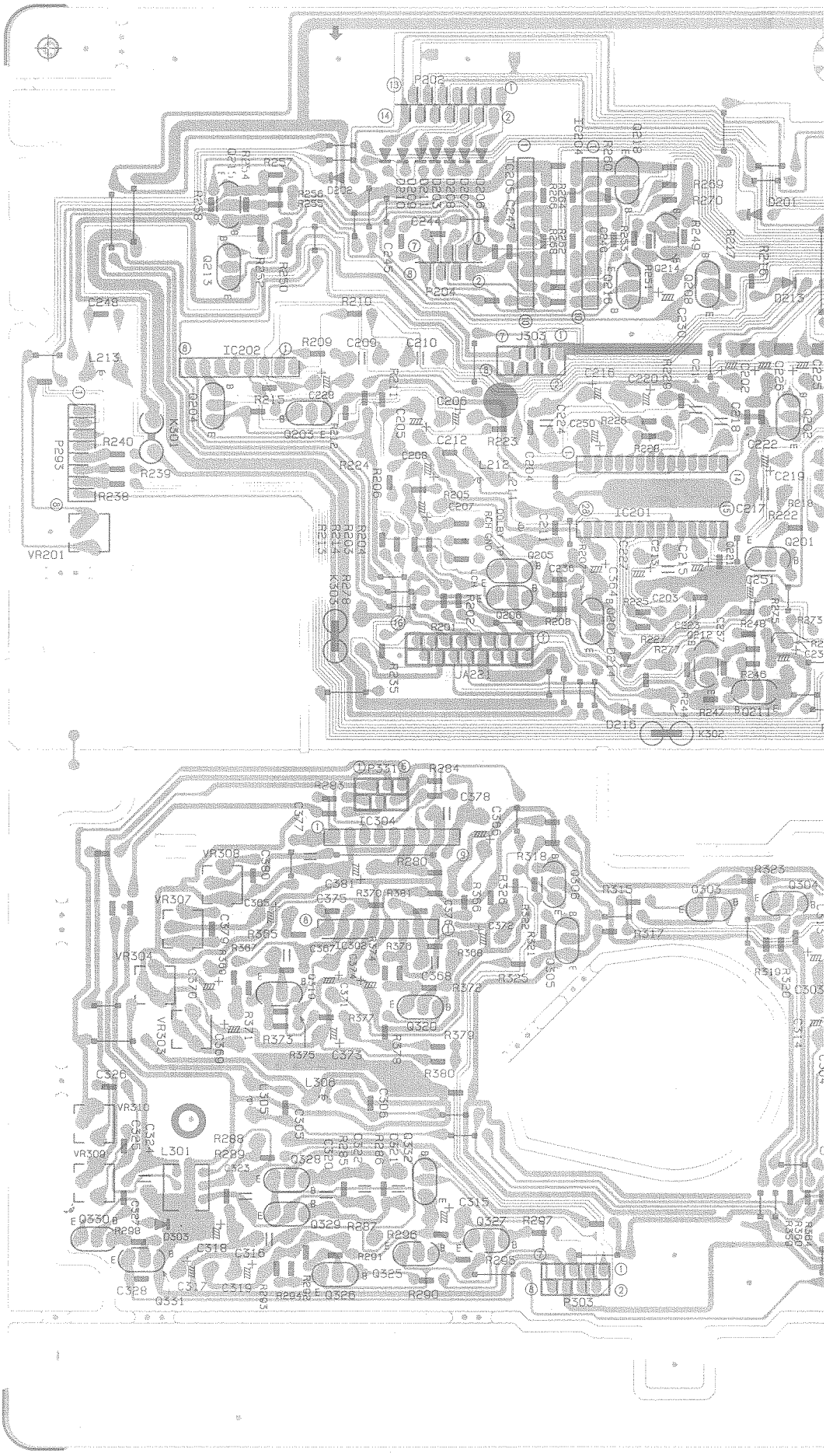
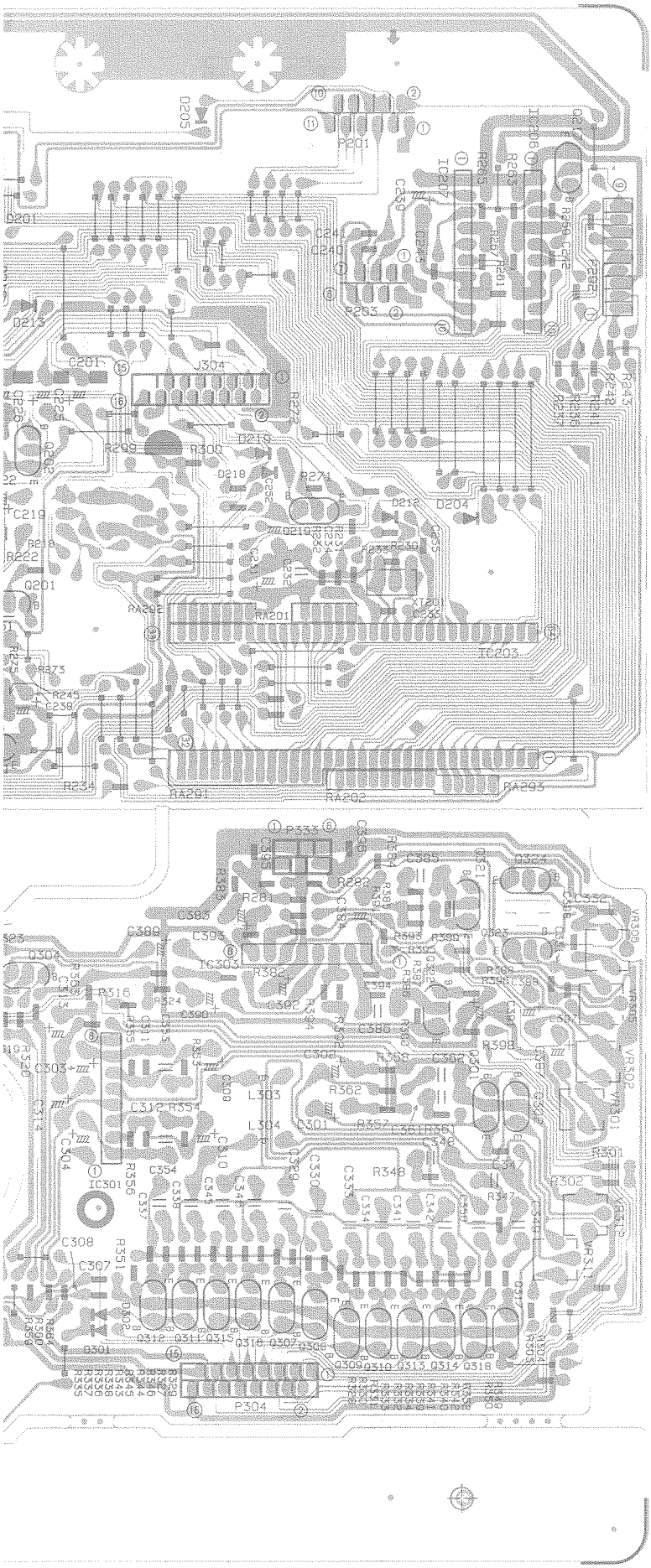
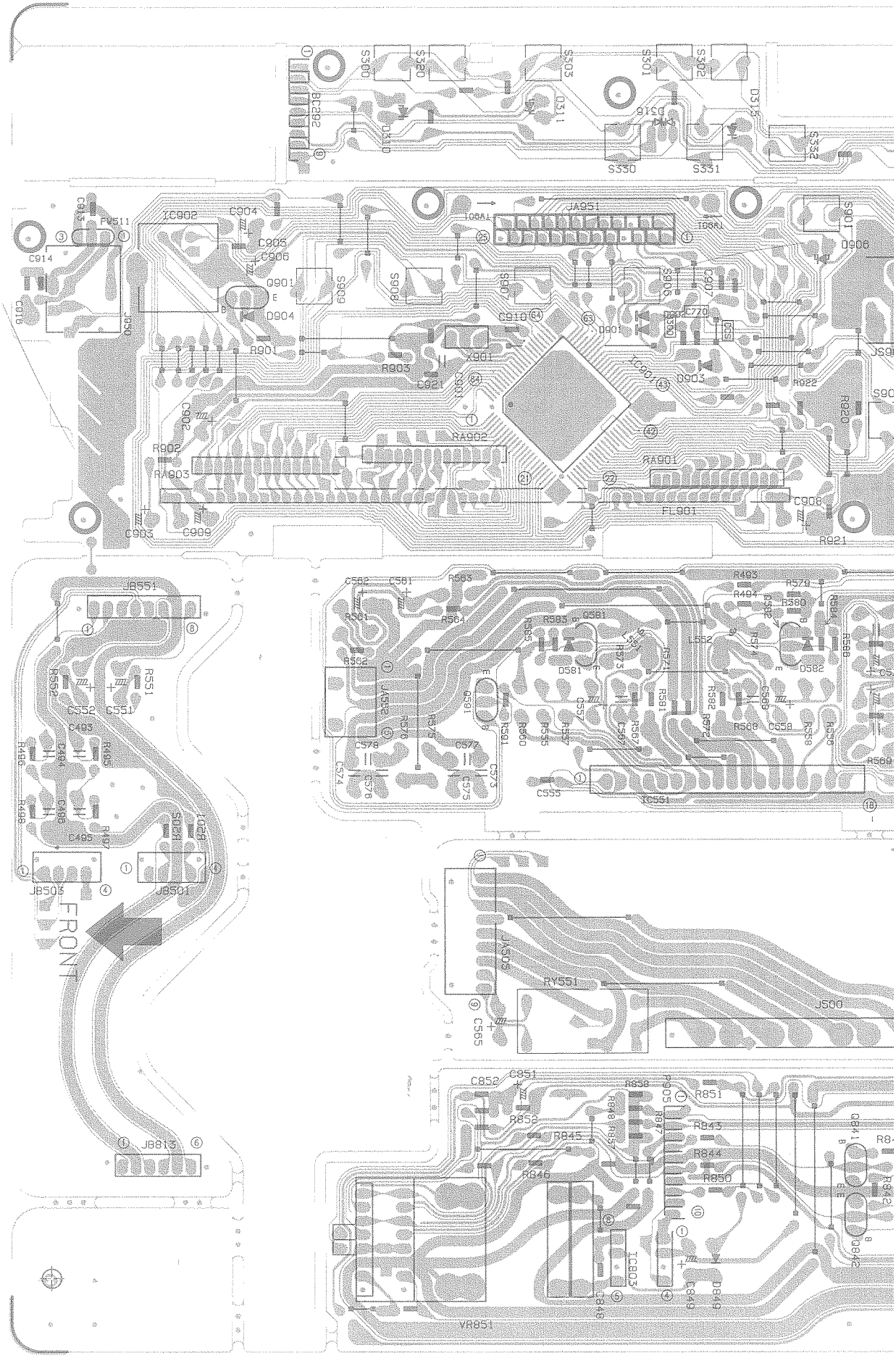
R910
R911
R912
R913
R914
R915
R916
R917
R918
R919
R920
R921
R922
R923
R924
R925
R926
R927
R928
R929
R930
R931
R932
R933
R934
R935
R936
R937
R938
R939
R940
R941
R942
R943
R944
R945
R946
R947
R948
R949
R950
R951
R952
R953
R954
R955
R956
R957
R958
R959
R960
R961
R962
R963
R964
R965
R966
R967
R968
R969
R970
R971
R972
R973
R974
R975
R976
R977
R978
R979
R980
R981
R982
R983
R984
R985
R986
R987
R988
R989
R990
R991
R992
R993
R994
R995
R996
R997
R998
R999

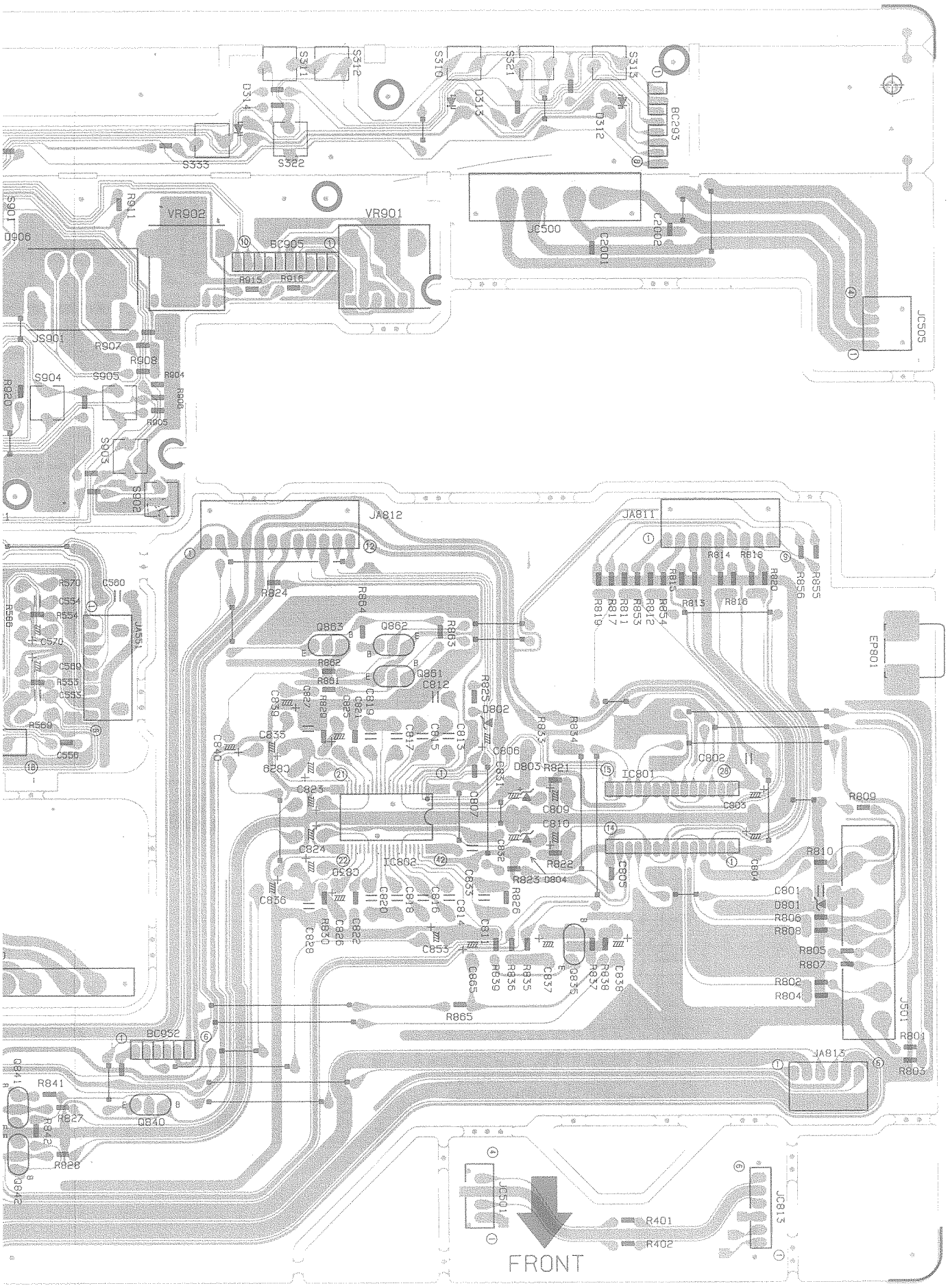
Deck Control P.C.Board (ENJ-086)




D205
P201
D201
D213
C201
J304
R299
R300
D215
D218
R271
D212
D204
C219
R219
R222
Q201
RA292
RA201
XT201
IC203
R273
R245
C238
R234
RA291
RA202
RA293
P333
R284
C383
C388
C395
Q304
IC303
R382
R316
R324
C390
C385
C386
C303
C308
L303
L304
C301
R362
R354
C312
C304
IC301
R356
C354
C338
C337
C342
C341
C350
C348
R348
R347
C308
C307
R351
Q312
Q311
Q315
Q310
Q307
Q308
Q309
Q313
Q314
Q318
Q301
P304
VR302
VR301
R302

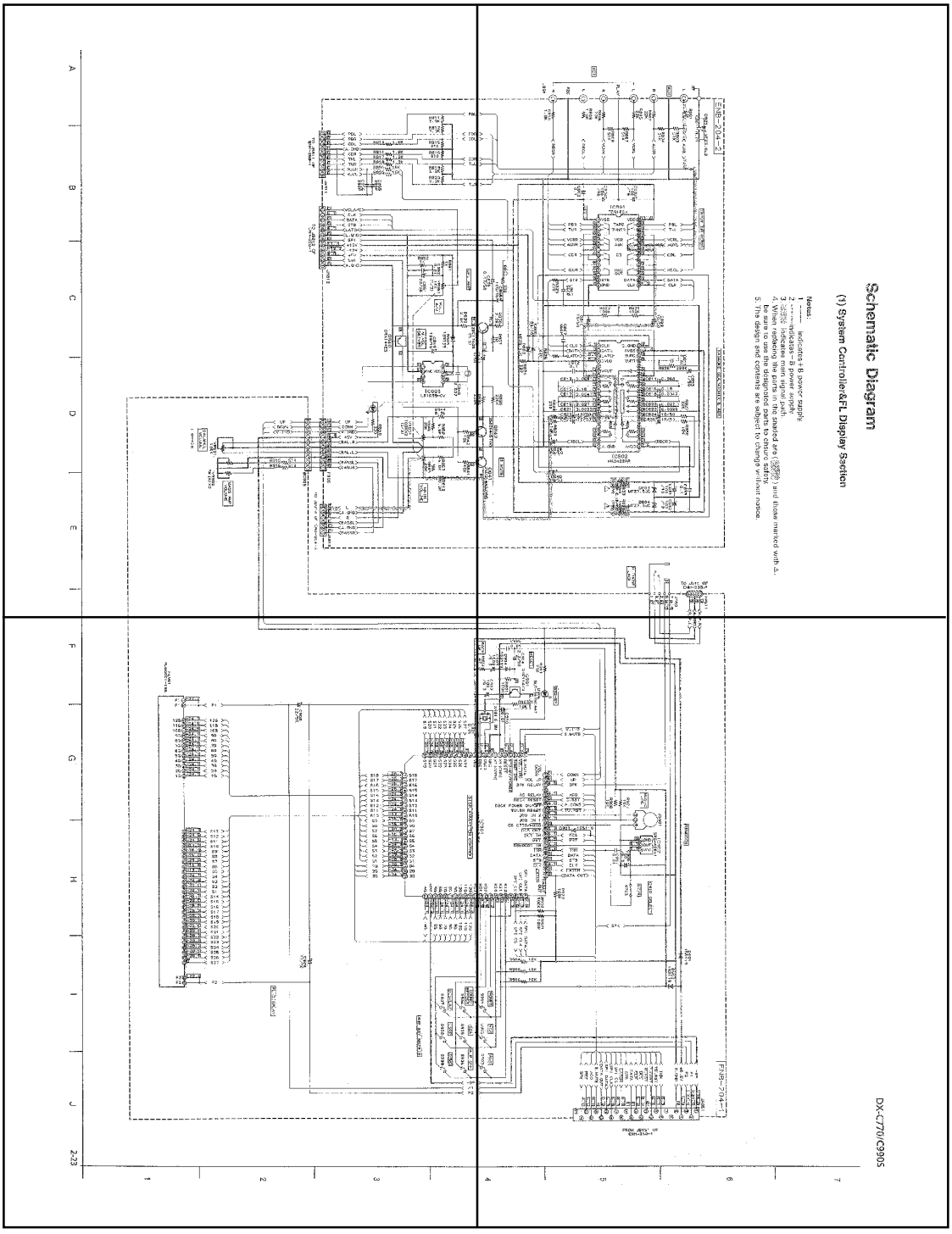
System Control&Power amp P.C.Board (ENB-204)




S311
S312
S310
S321
S313
D314
D313
Q312
BC293
S333
S322
S901
R911
VR902
VR901
D906
BC905
R915
R916
JC500
C202
C201
JC505
JS901
R907
R908
R904
R909
S904
S905
R905
R920
S903
S902
JA812
JA811
R824
R864
R814
R818
R820
R856
R855
R813
R816
R819
R817
R811
R853
R812
R854
R815
Q863
Q862
R865
R862
Q861
R861
C812
EP801
C856
C827
R827
C825
C819
C833
C817
C815
C813
D802
R825
R833
C806
C831
C828
C804
D803
R821
IC901
C802
C823
C807
C809
C810
C803
R809
C824
C832
R822
C805
R810
IC802
C850
R823
D804
C801
D801
R806
R808
C856
C853
C820
C818
C816
C814
C811
R826
R805
R807
C829
R830
C826
C822
R802
R804
C853
C865
R839
R835
R836
C837
Q835
R838
R837
C838
J501
R865
R801
BC952
JA813
R803
Q841
R841
R827
Q840
R828
Q842
JC501
JC813
R401
R402
FRONT

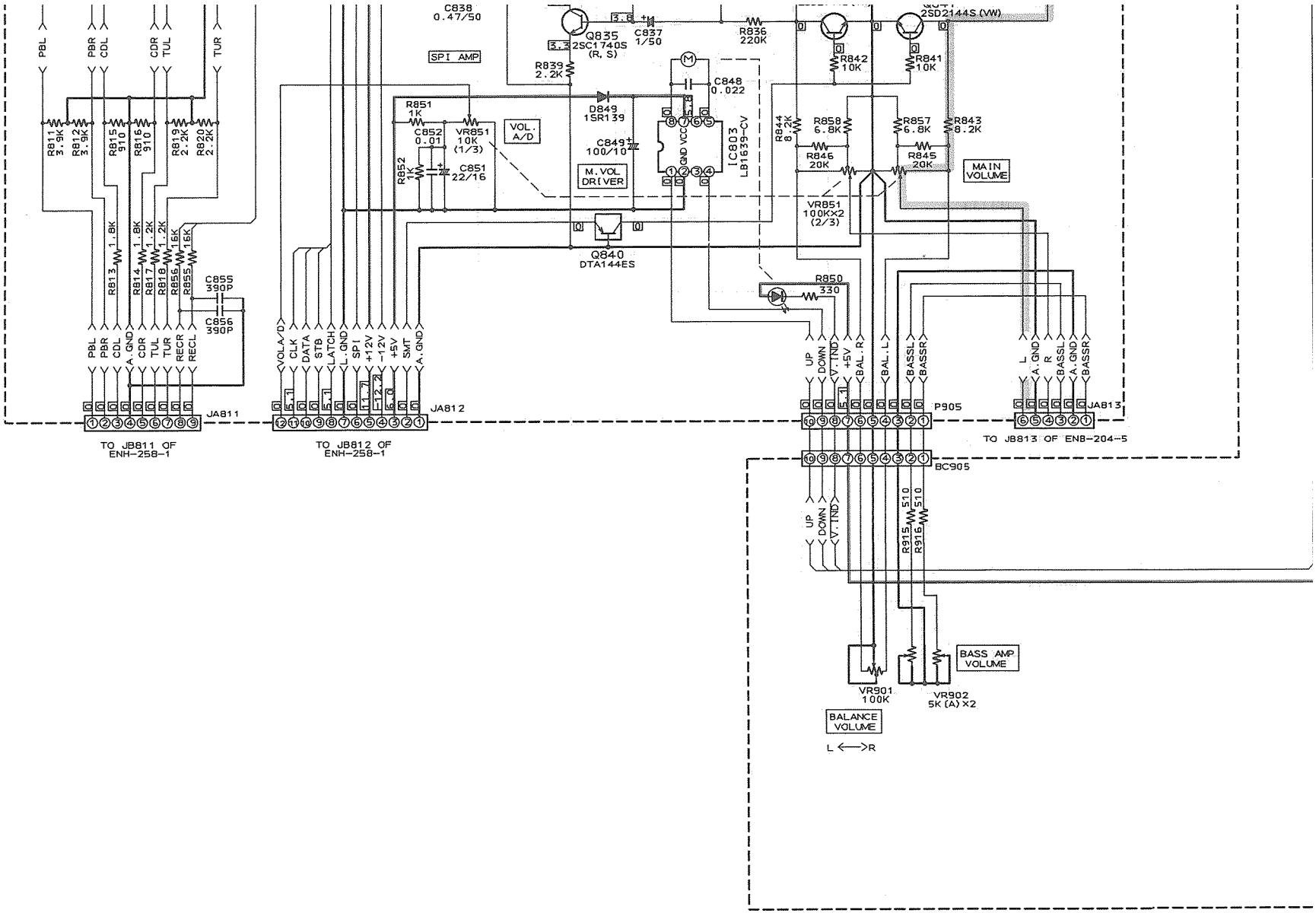
P2-23-a

P2-23-b



P2-23-c

P2-23-d


C838
0.47/50
SPI AMP
Q835
2SC1740S
(R, S)
C837
1/50
R836
220K
2SD2144S (VW)
R842
10K
R841
10K
R839
2.2K
D849
1SR139
C848
0.022
R851
1K
C852
0.01
VR851
10K
(1/3)
VOL.
A/D
C849
100/10
R852
1K
C851
22/16
M.VOL
DRIVER
IC803
LB1639-CV
R844
8.2K
R858
6.8K
R857
6.8K
R843
8.2K
R846
20K
R845
20K
MAIN
VOLUME
VR851
100KX2
(2/3)
Q840
DTA144ES
R850
330
R811
3.9K
R812
3.9K
R815
910
R816
910
R819
2.2K
R820
2.2K
R813
1.8K
R814
1.8K
R817
1.2K
R818
1.2K
R856
1.6K
R855
1.6K
C855
390P
C856
390P
PBL
PBR
CDL
A.GND
CDR
TUL
TUR
RECR
RECL
JA811
TO JB811 OF
ENH-258-1
VOLA/D
CLK
DATA
STB
LATCH
L.GND
SPI
+12V
-12V
+5V
SWT
A.GND
JA812
TO JB812 OF
ENH-258-1
UP
DOWN
V.IND
+5V
BAL.R
BAL.L
BASSL
BASSR
P905
L
A.GND
R
BASSL
A.GND
BASSR
JA813
TO JB813 OF ENB-204-5
BC905
R915
510
R916
510
BASS AMP
VOLUME
VR901
100K
VR902
5K (A) X2
BALANCE
VOLUME
L ⟷ R

A B C D E

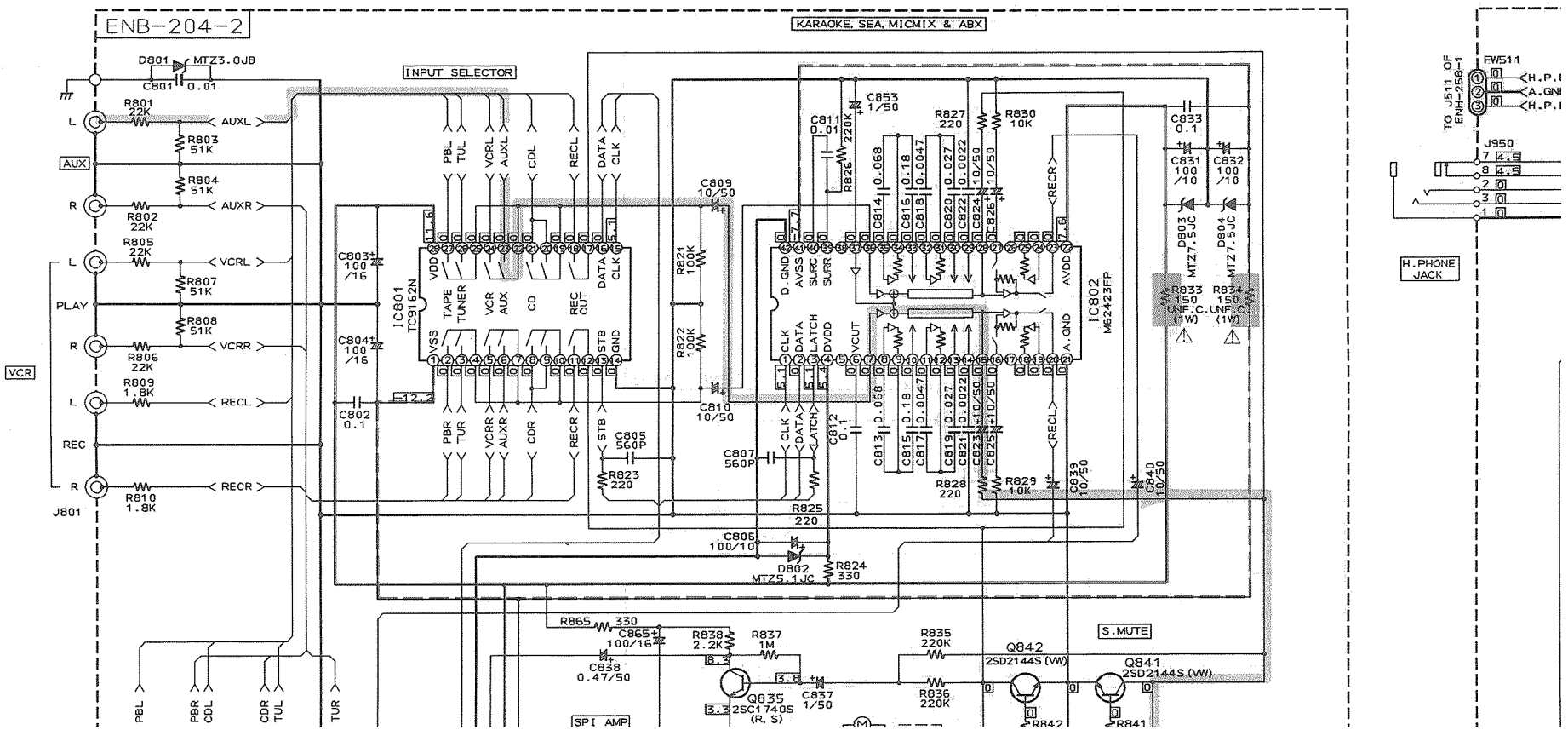
P2-23-a

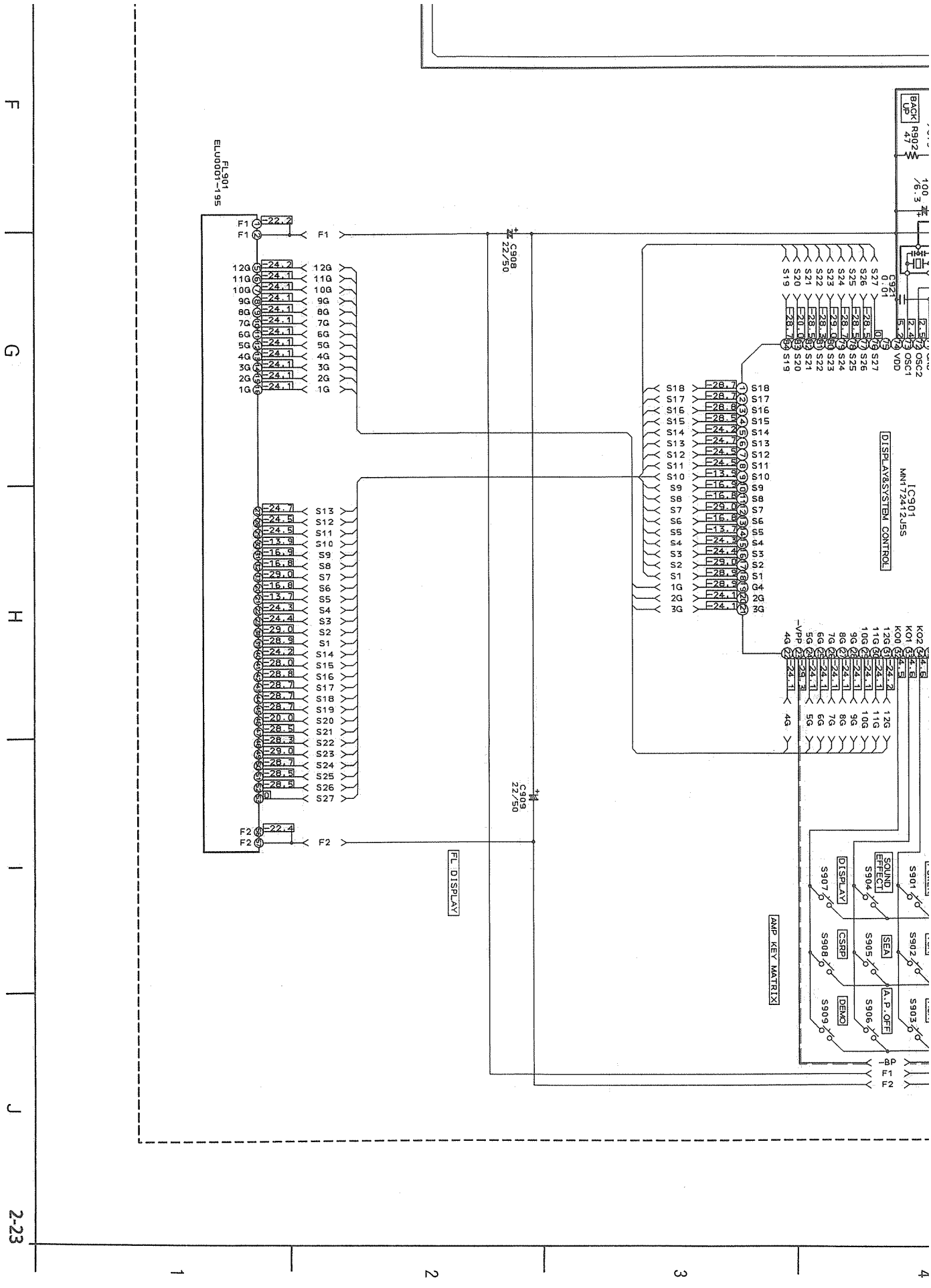
Schematic Diagram

(1) System Controller&FL Display Section

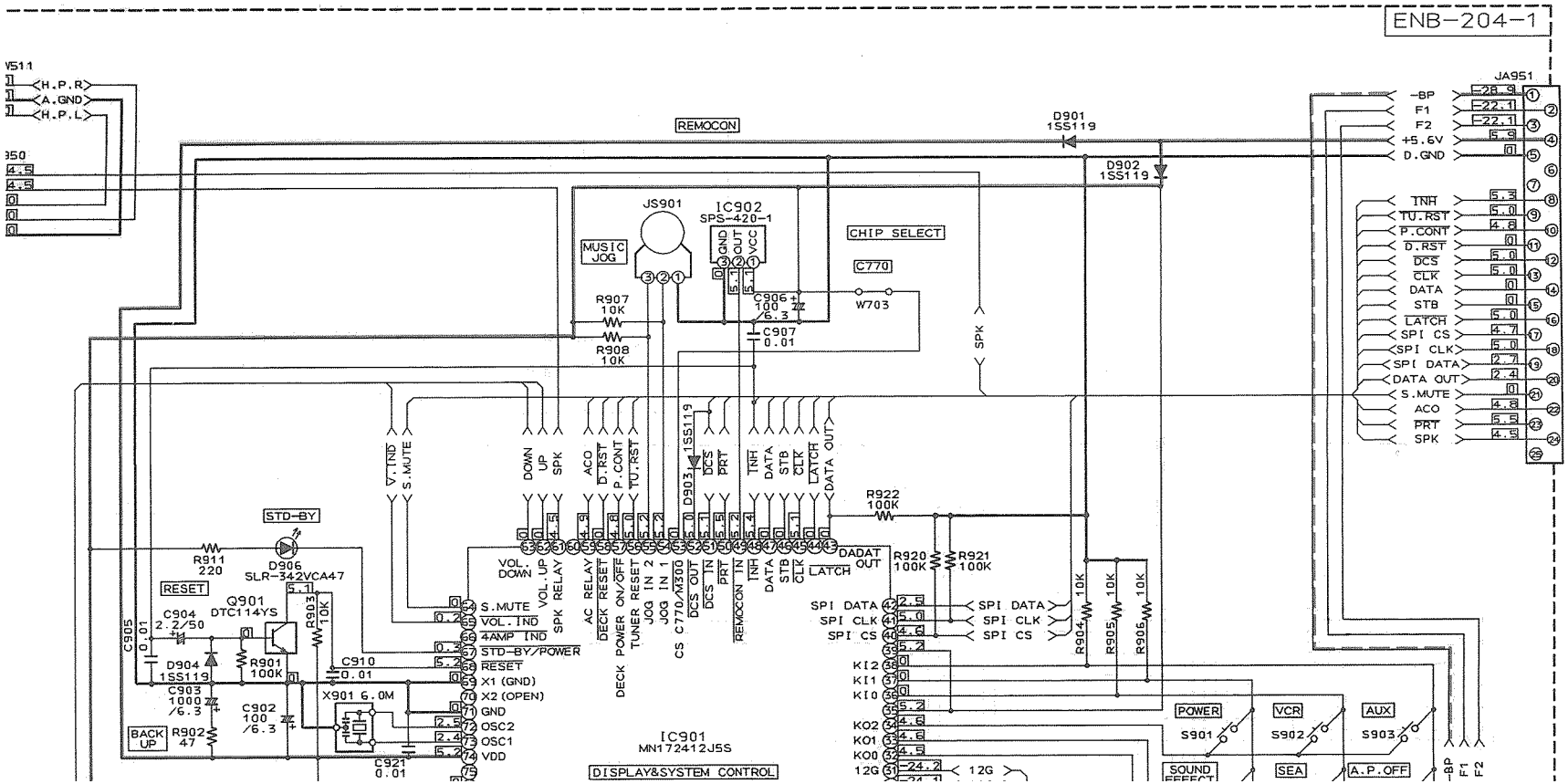
Notes:

1. ——— indicates + B power supply.
2. - - - - - indicates − B power supply.
3. ▒▒▒ indicates main signal path.
4. When replacing the parts in the shaded are (▒▒▒) and those marked with ⚠, be sure to use the designated parts to ensure safety.
5. The design and contents are subject to change without notice.

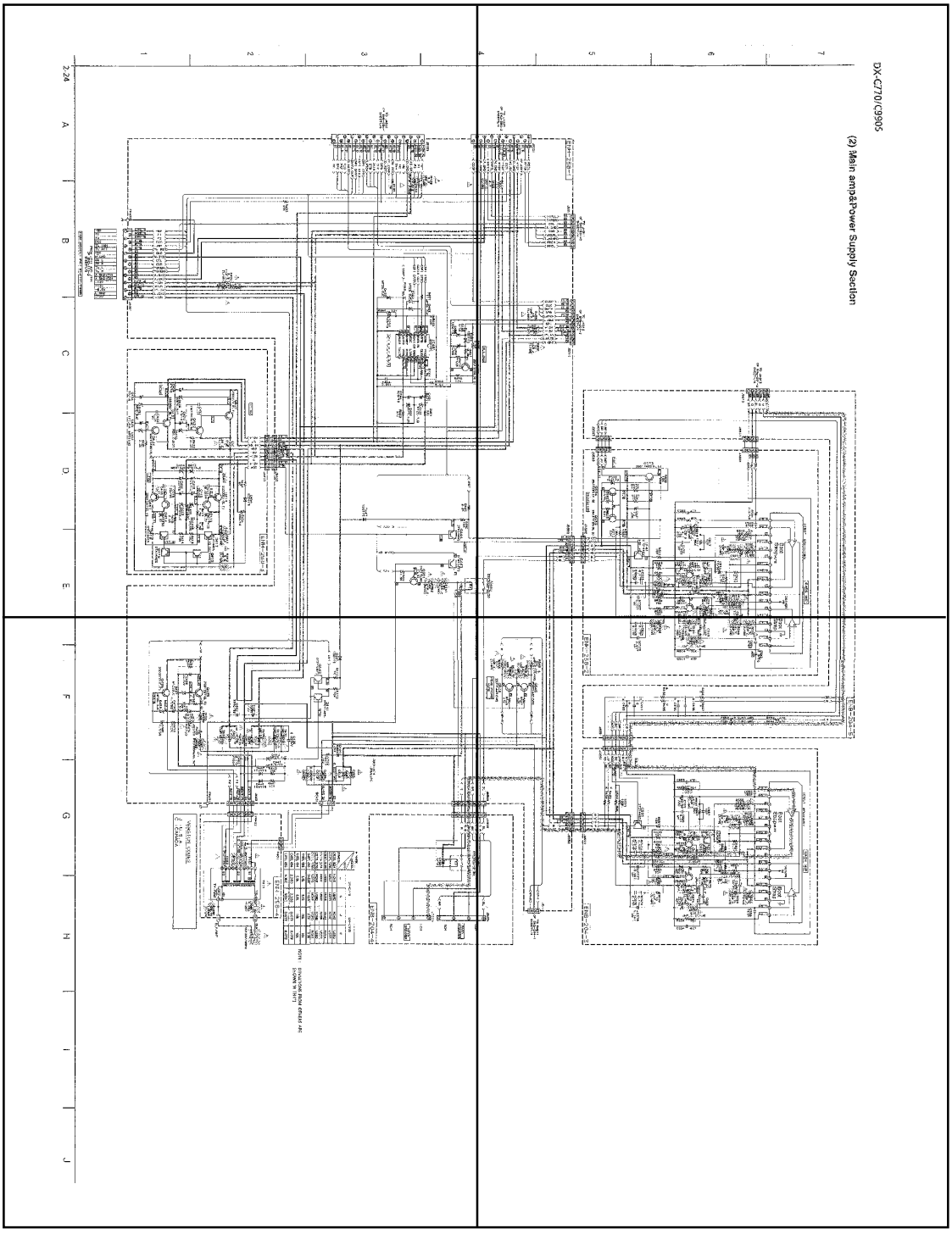



FL901
ELU0001-195
IC901
MN1724-12-J5S
DISPLAY&SYSTEM CONTROL
FL DISPLAY
AMP KEY MATRIX
BACK UP
R902
47
C908
22/50
C909
22/50
C921
0.01
SOUND EFFECT
DISPLAY
CSRP
SEA
A.P.OFF
DEMO
S901
S902
S903
S904
S905
S906
S907
S908
S909
F1
F2
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
S16
S17
S18
S19
S20
S21
S22
S23
S24
S25
S26
S27
1G
2G
3G
4G
5G
6G
7G
8G
9G
10G
11G
12G
OSC1
OSC2
VDD
-VPP
KO0
KO1
KO2
F
G
H
I
J
1
2
3
4
2-23

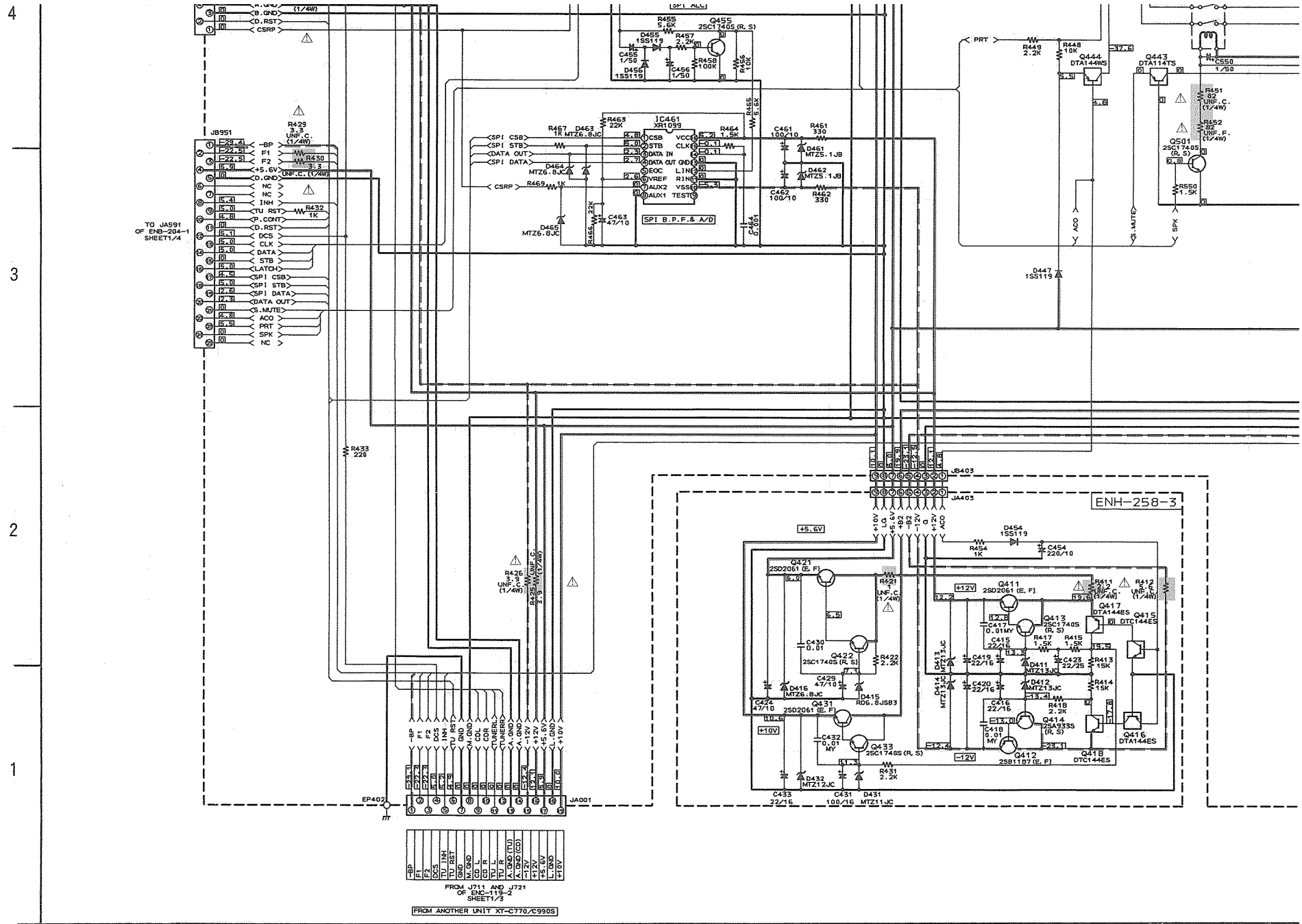
P2-23-c


ENB-204-1
H.P.R
A.GND
H.P.L
REMOCON
D901 1SS119
D902 1SS119
JS901
IC902 SPS-420-1
MUSIC JOG
CHIP SELECT
C770
W703
R907 10K
R908 10K
C906 100 6.3
C907 0.01
SPK
JA951
-BP
F1
F2
+5.6V
D.GND
TNH
TU.RST
P.CONT
D.RST
DCS
CLK
DATA
STB
LATCH
SPI CS
SPI CLK
SPI DATA
DATA OUT
S.MUTE
ACO
PRT
SPK
FROM JB951 OF ENH-258-1
V.IND
S.MUTE
DOWN
UP
SPK
ACO
D.RST
P.CONT
TU.RST
D903 1SS119
DCS
PRT
TNH
DATA
STB
CLK
LATCH
DATA OUT
R922 100K
R920 100K
R921 100K
R904 10K
R905 10K
R906 10K
STD-BY
R911 220
D906 SLR-342VCA47
RESET
Q901 DTC114YS
C904 2.2/50
C905 0.01
R903 10K
D904 1SS119
R901 100K
C910 0.01
C903 1000 /6.3
C902 100 /6.3
X901 6.0M
BACK UP
R902 47
C921 0.01
VOL. DOWN
VOL. UP
SPK
RELAY
AC
RELAY
DECK RESET
DECK ON/OFF
TUNER RESET
JOG IN 2
JOG IN 1
CS C770/M300
DCS OUT
DCS IN
PRT
REMOCON IN
TNH
DATA
STB
CLK
LATCH
DADAT OUT
S.MUTE
VOL. IND
4AMP IND
STD-BY/POWER
RESET
X1 (GND)
X2 (OPEN)
GND
OSC2
OSC1
VDD
SPI DATA
SPI CLK
SPI CS
KI2
KI1
KI0
KO2
KO1
KO0
12G
IC901
MN172412J5S
DISPLAY&SYSTEM CONTROL
POWER
S901
VCR
S902
AUX
S903
SOUND EFFECT
SEA
A.P.OFF
-BP
F1
F2

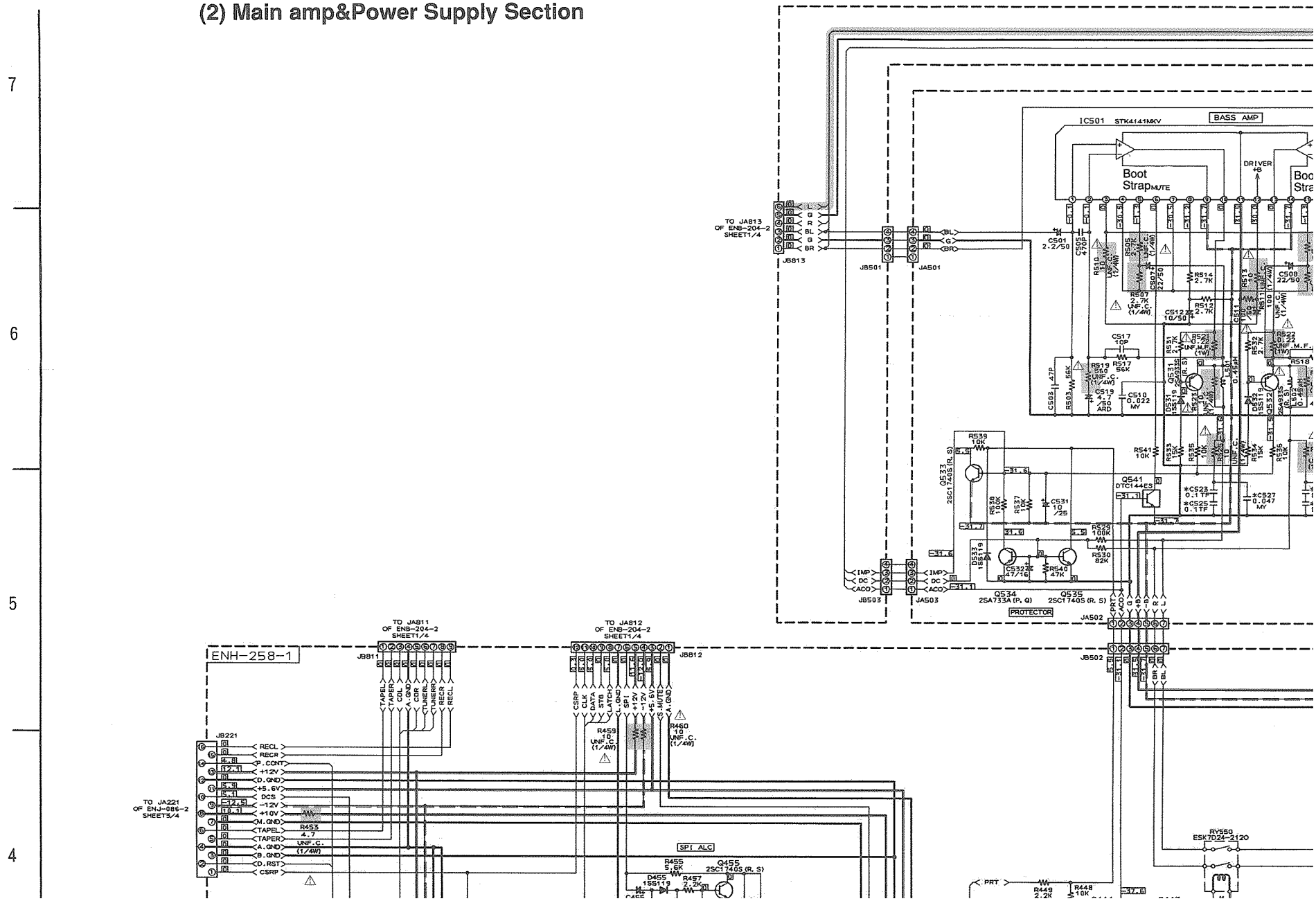
P2-24-a P2-24-b

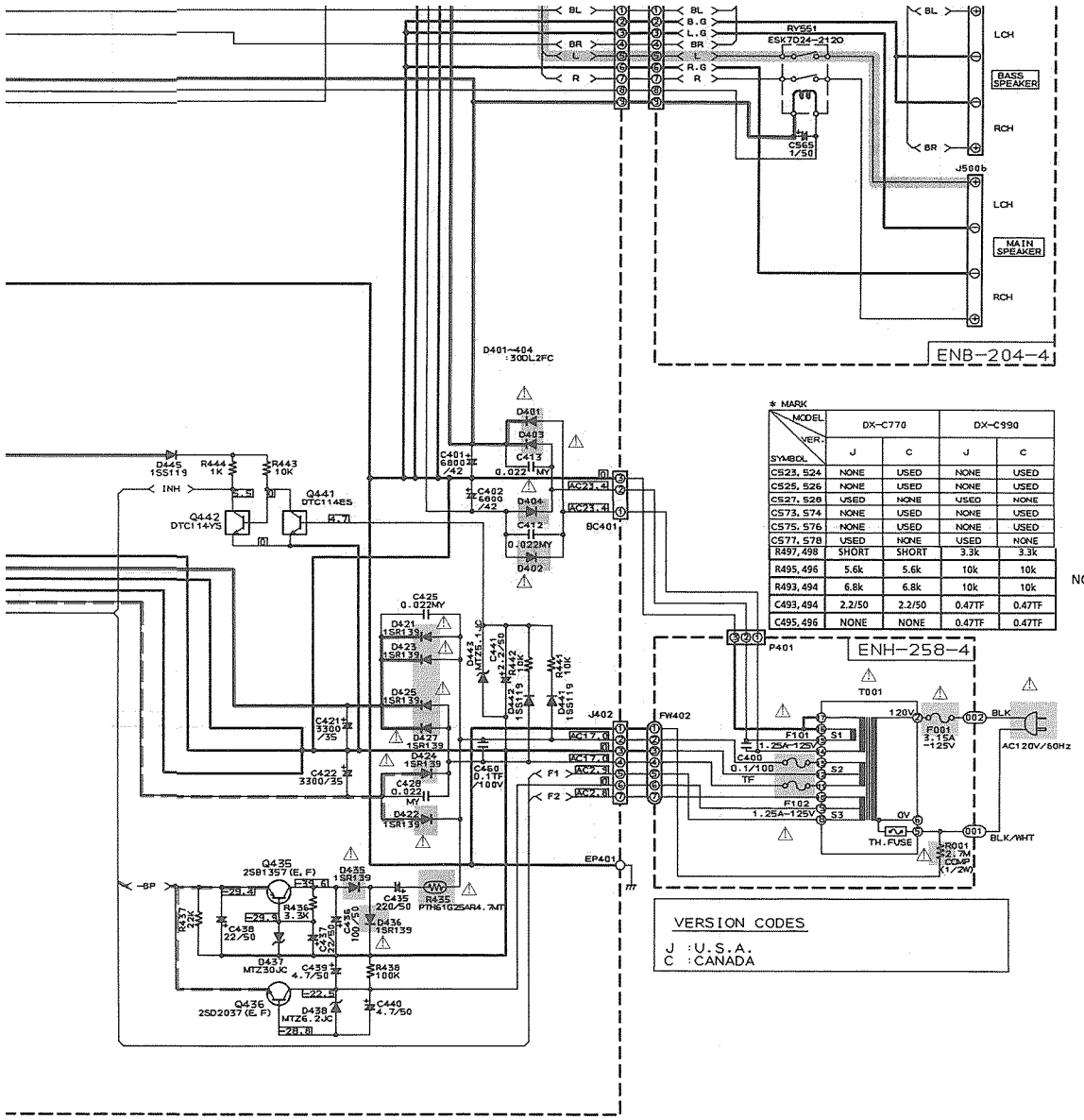


P2-24-c P2-24-d


ENH-258-3
JB951
JA403
JB403
JA001
EP402
IC461
XR1099
SPI B.P.F.& A/D
TO JA591 OF ENB-204-1 SHEET1/4
FROM J711 AND J721 OF ENC-119-2 SHEET1/3
FROM ANOTHER UNIT XT-C770/C990S
2-24
A
B
C
D
E
P2-24-a

(2) Main amp&Power Supply Section





* MARK

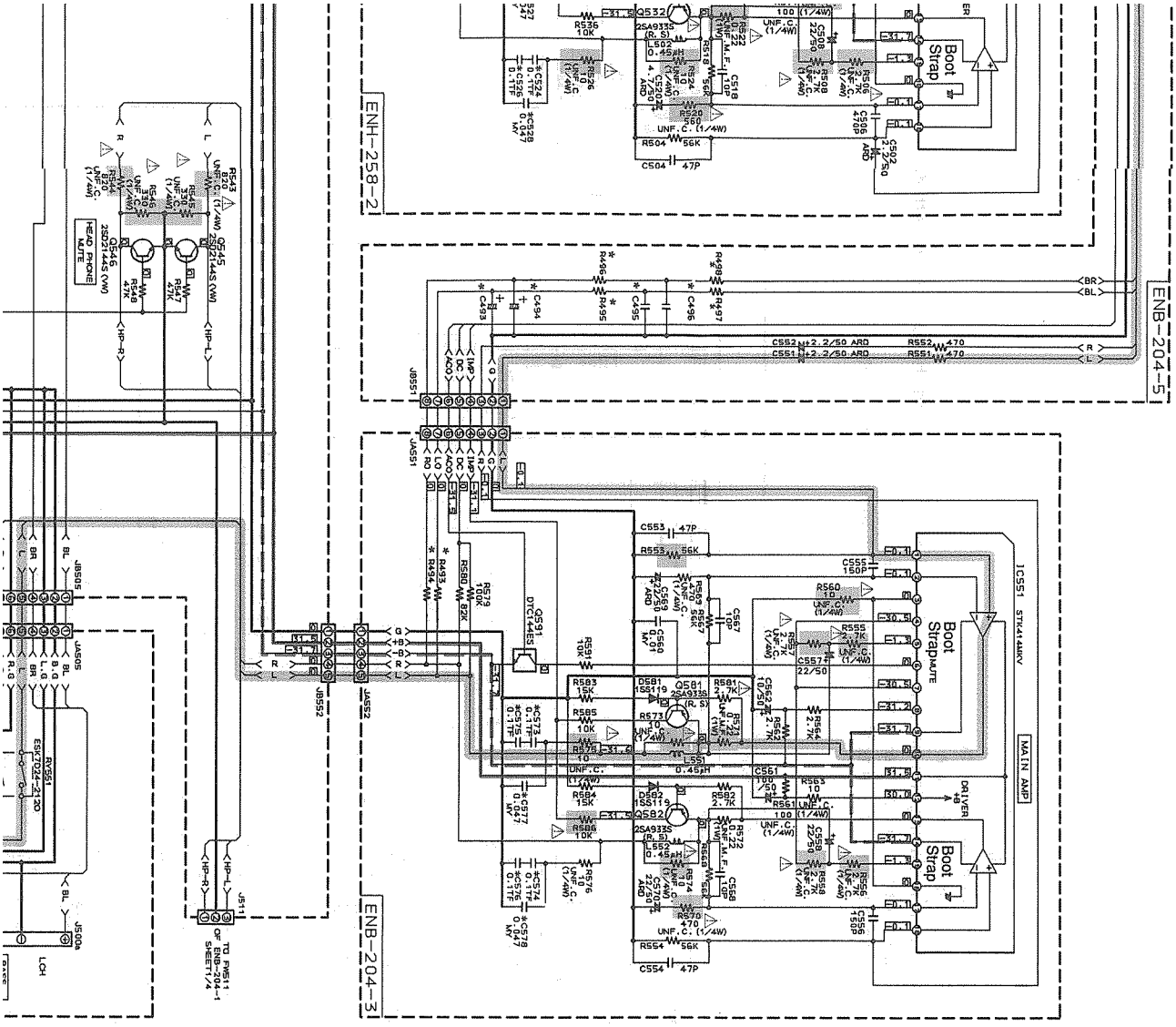
MODEL / VER. / SYMBOL	DX-C770 J	DX-C770 C	DX-C990 J	DX-C990 C
C523, 524	NONE	USED	NONE	USED
C525, 526	NONE	USED	NONE	USED
C527, 528	USED	NONE	USED	NONE
C573, 574	NONE	USED	NONE	USED
C575, 576	NONE	USED	NONE	USED
C577, 578	USED	NONE	USED	NONE
R497, 498	SHORT	SHORT	3.3k	3.3k
R495, 496	5.6k	5.6k	10k	10k
R493, 494	6.8k	6.8k	10k	10k
C493, 494	2.2/50	2.2/50	0.47TF	0.47TF
C495, 496	NONE	NONE	0.47TF	0.47TF

NOTE : DEVIATIONS FROM OTHERS ARE SHOWN WITH (*)

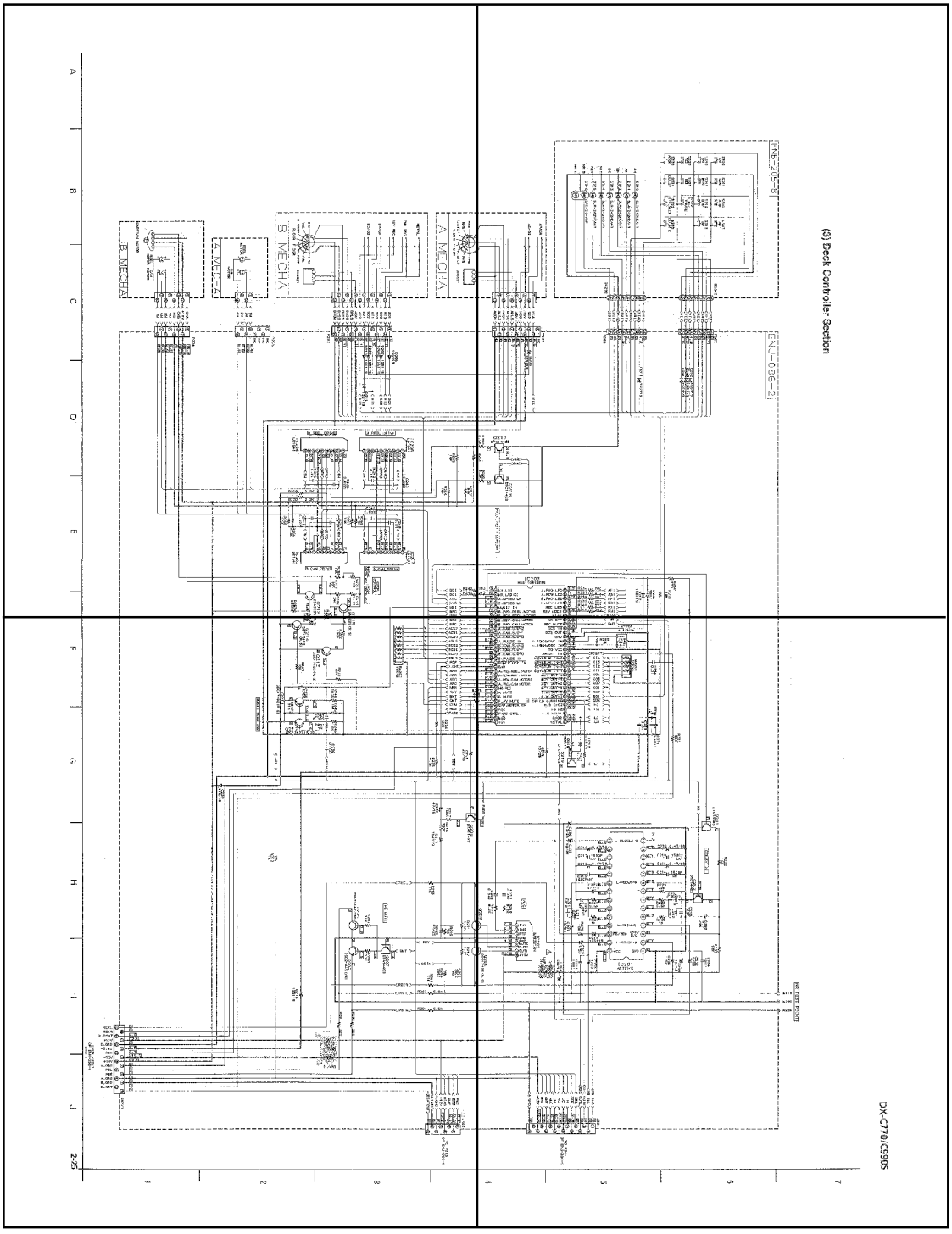
VERSION CODES

J :U.S.A.
C :CANADA

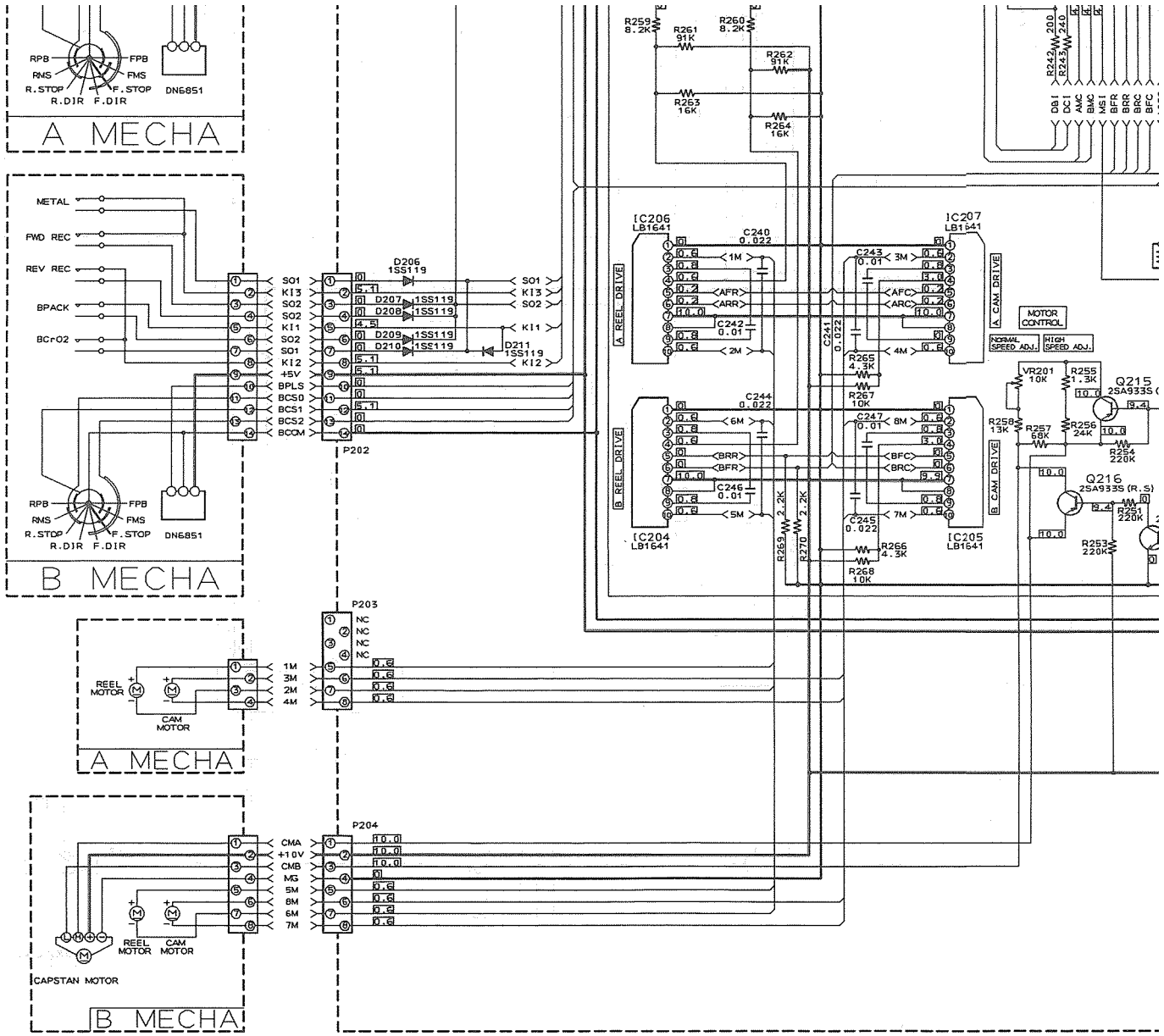
F G H I J


ENH-258-2
ENB-204-5
ENB-204-3
MAIN AMP
Boot Strap
Boot Strap/MUTE
STK414MKV
HEAD PHONE MUTE
TO FWS11 OF ENB-204-1 SHEET1/4
LCH

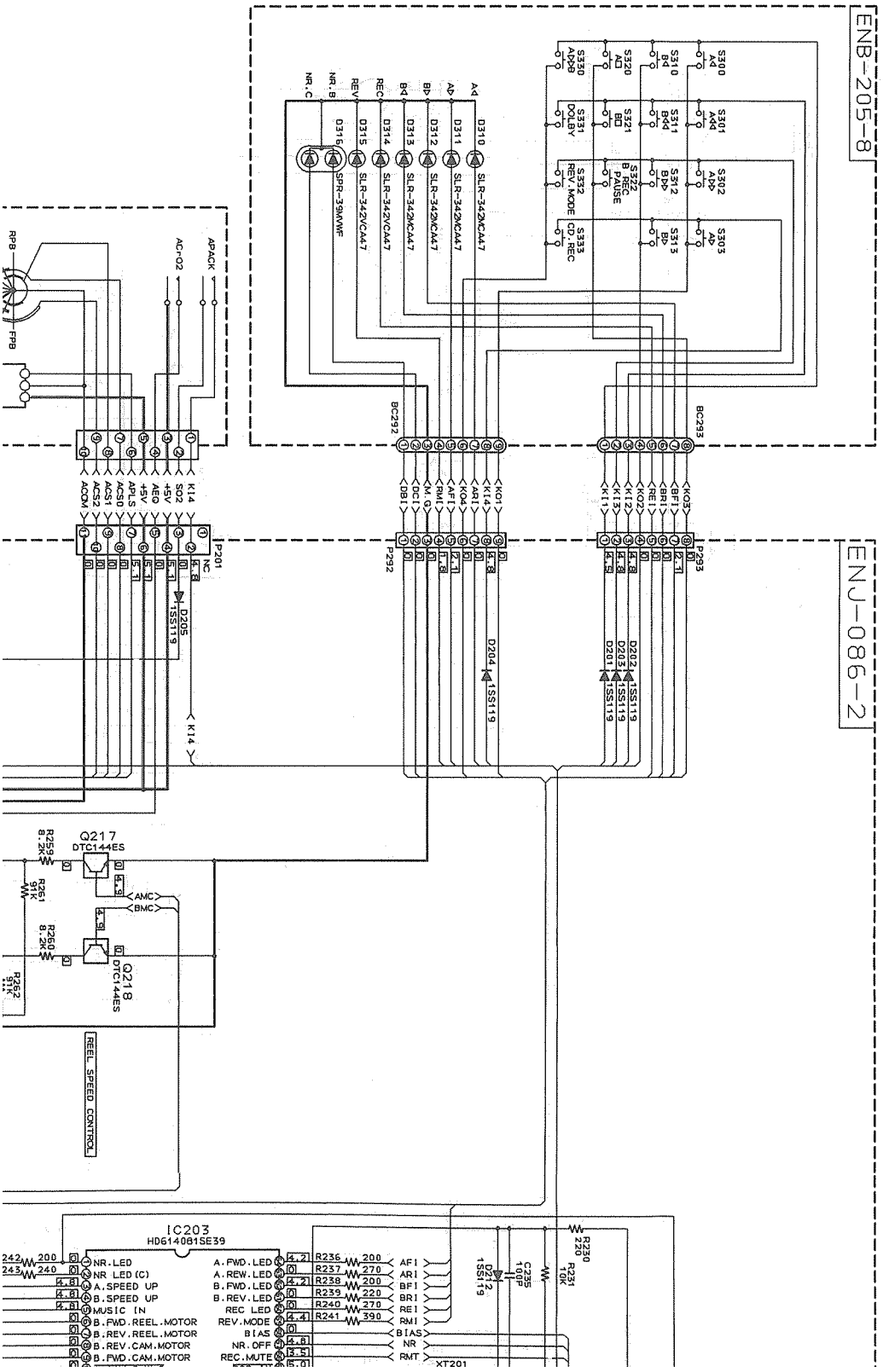
P2-25-a P2-25-b

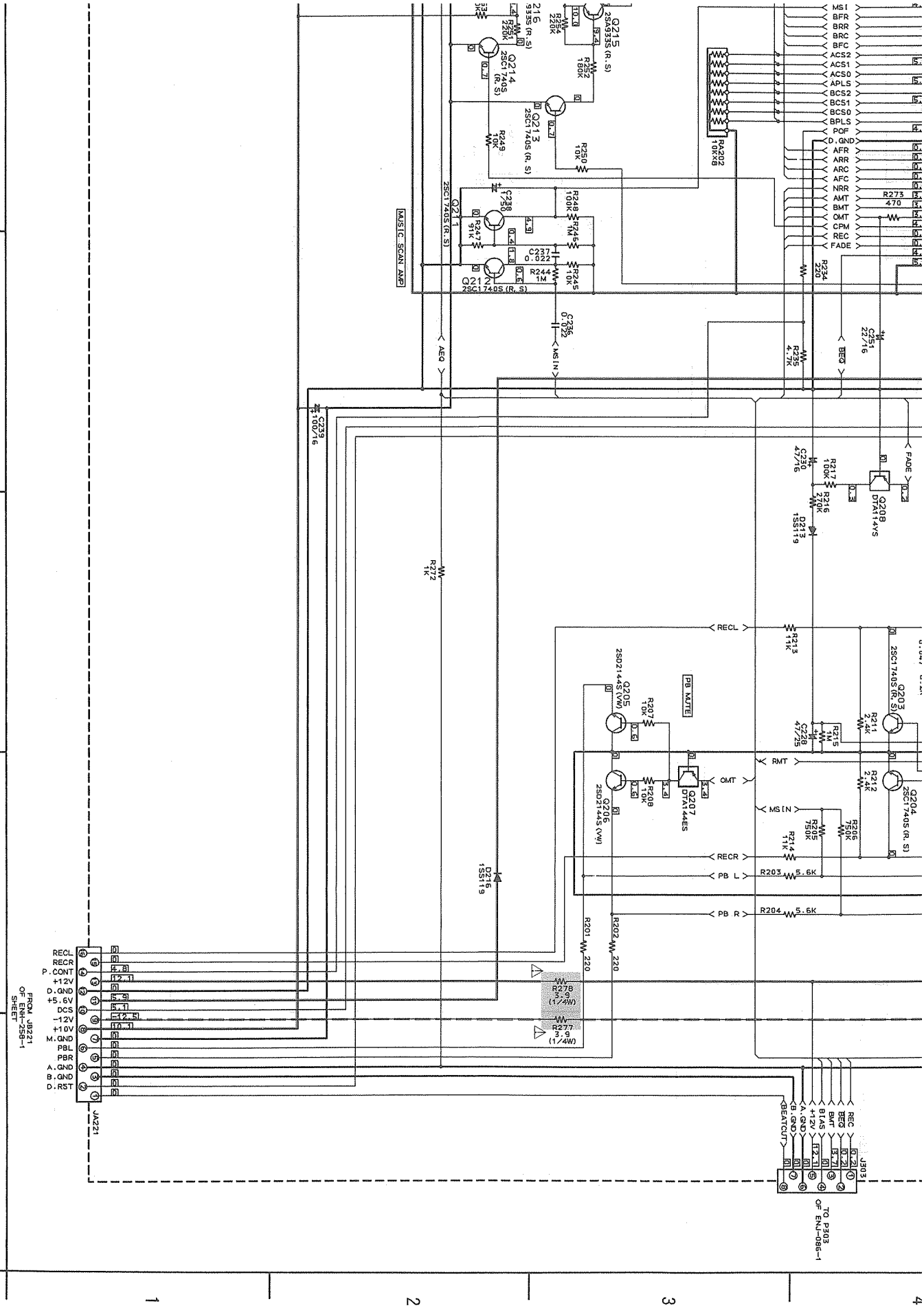


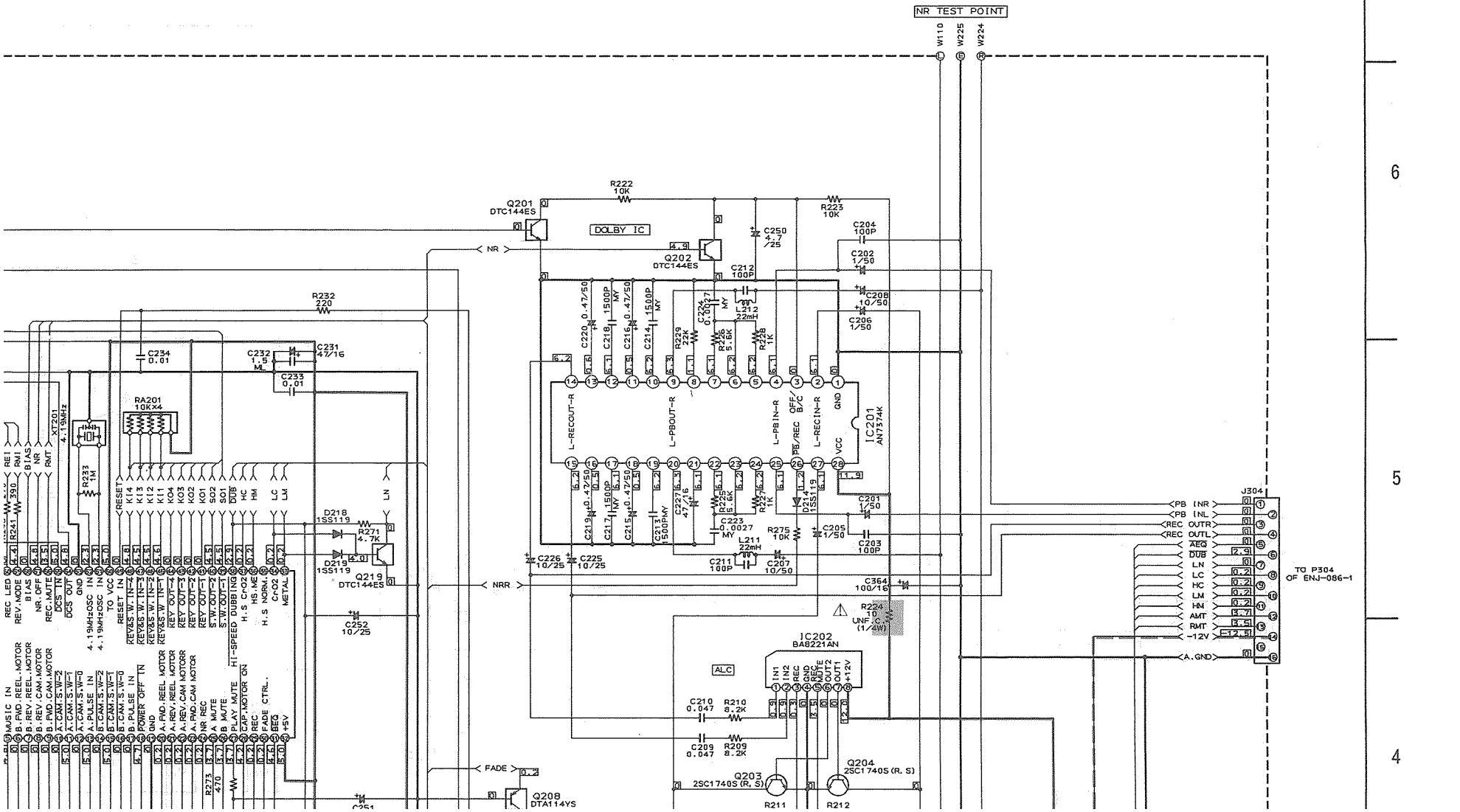
P2-25-c P2-25-d


A MECHA
RPB
FPB
RMS
FMS
R.STOP
F.STOP
R.DIR
F.DIR
DN6851
B MECHA
METAL
FWD REC
REV REC
BPACK
BCr02
P202
P203
P204
REEL MOTOR
CAM MOTOR
CAPSTAN MOTOR
IC206 LB1641
IC207 LB1641
IC204 LB1641
IC205 LB1641
A REEL DRIVE
B REEL DRIVE
A CAM DRIVE
B CAM DRIVE
MOTOR CONTROL
NORMAL SPEED ADJ.
HIGH SPEED ADJ.
Q215 2SA933S
Q216 2SA933S (R.S)

(3) Deck Controller Section




MSI
BFR
BRR
BRC
BFC
ACS2
ACS1
ACS0
APLS
BCS2
BCS1
BCS0
BPLS
POF
D.GND
AFR
ARR
ARC
AFC
NRR
AMT
BMT
OMT
CPM
REC
FADE
MUSIC SCAN AMP
AEQ
MSIN
BEQ
FADE
RECL
RECR
PB MUTE
RMT
OMT
MSIN
PB L
PB R
RECL
RECR
P.CONT
+12V
D.GND
+5.6V
DCS
-12V
+10V
M.GND
PBL
PBR
A.GND
B.GND
D.RST
JA221
FROM JB221 OF ENH-258-1 SHEET
BEATCUT
B.GND
A.GND
+12V
BIAS
BMT
BEQ
REC
J303
TO P303 OF ENJ-086-1
1
2
3
4
F
G
H
I
J
2-25


NR TEST POINT
W110
W225
W224
DOLBY IC
IC201
AN7374K
IC202
BA8221AN
Q201
DTC144ES
Q202
DTC144ES
Q203
2SC1740S (R, S)
Q204
2SC1740S (R, S)
Q208
DTA114YS
Q219
DTC144ES
D218
1SS119
D219
1SS119
RA201
10KX4
XT201
4.19MHz
ALC
NR
NRR
FADE
J304
TO P304
OF ENJ-086-1
MUSIC IN
REC LED
REV.MODE
BIAS
NR. OFF
REC.MUTE
DCS IN
DCS OUT
GND
A.PULSE IN
B.PULSE IN
POWER OFF IN
A.FWD.REEL MOTOR
A.REV.REEL MOTOR
A.REV.CAM MOTORR
A.FWD.CAM MOTOR
A.NR REC
A MUTE
B MUTE
PLAY MUTE
HI-SPEED DUBBING
CAP.MOTOR ON
REC
FADE CTRL.
BEQ
+5V
REI
RMI
BIAS
NR
RMT
RESET
TO VCC
REV.MODE
REC LED
REC OUTR
REC OUTL
AEQ
DUB
LN
LC
HC
LM
HM
AMT
RMT
-12V
A.GND
PB INR
PB INL

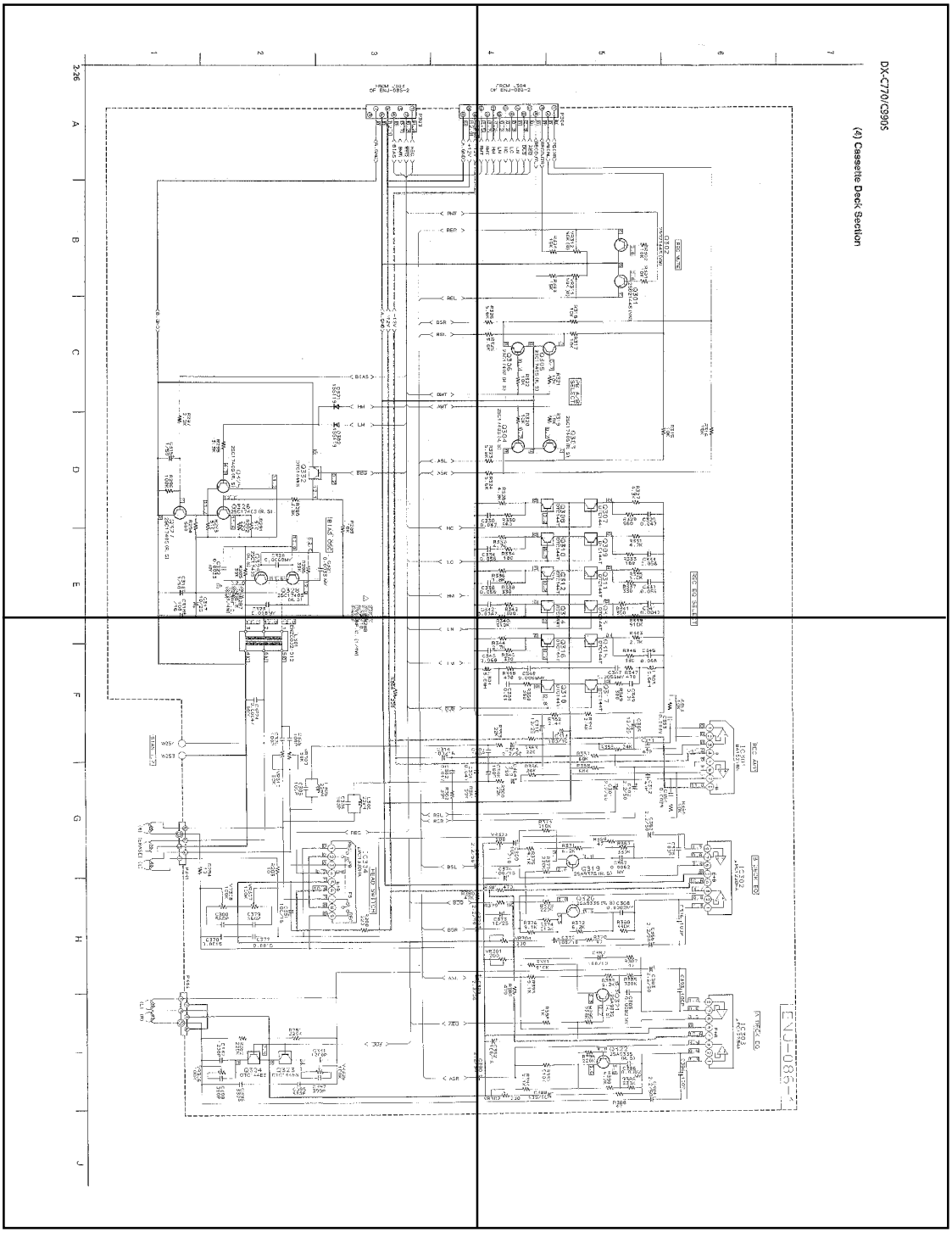
7

6

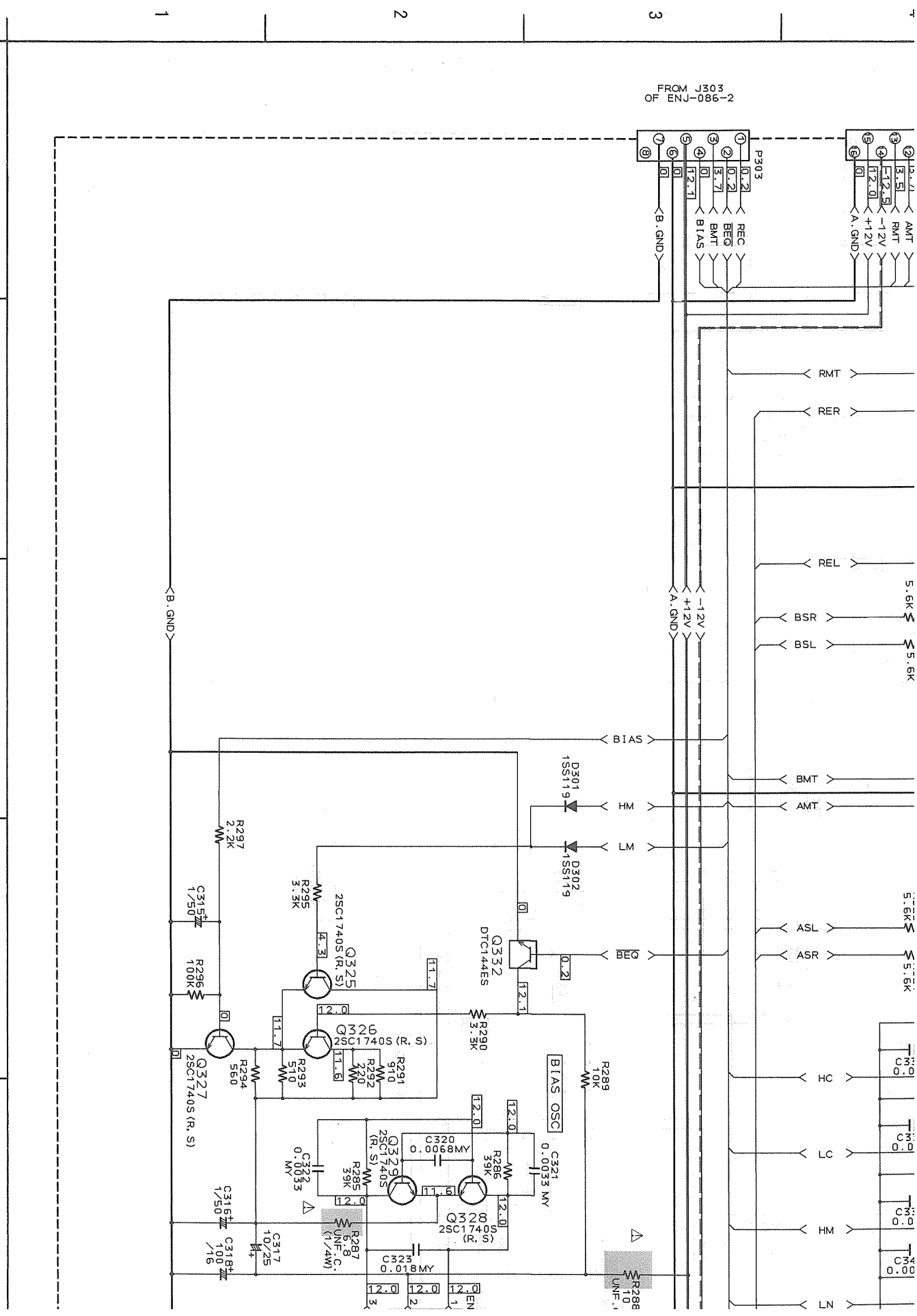
5

4

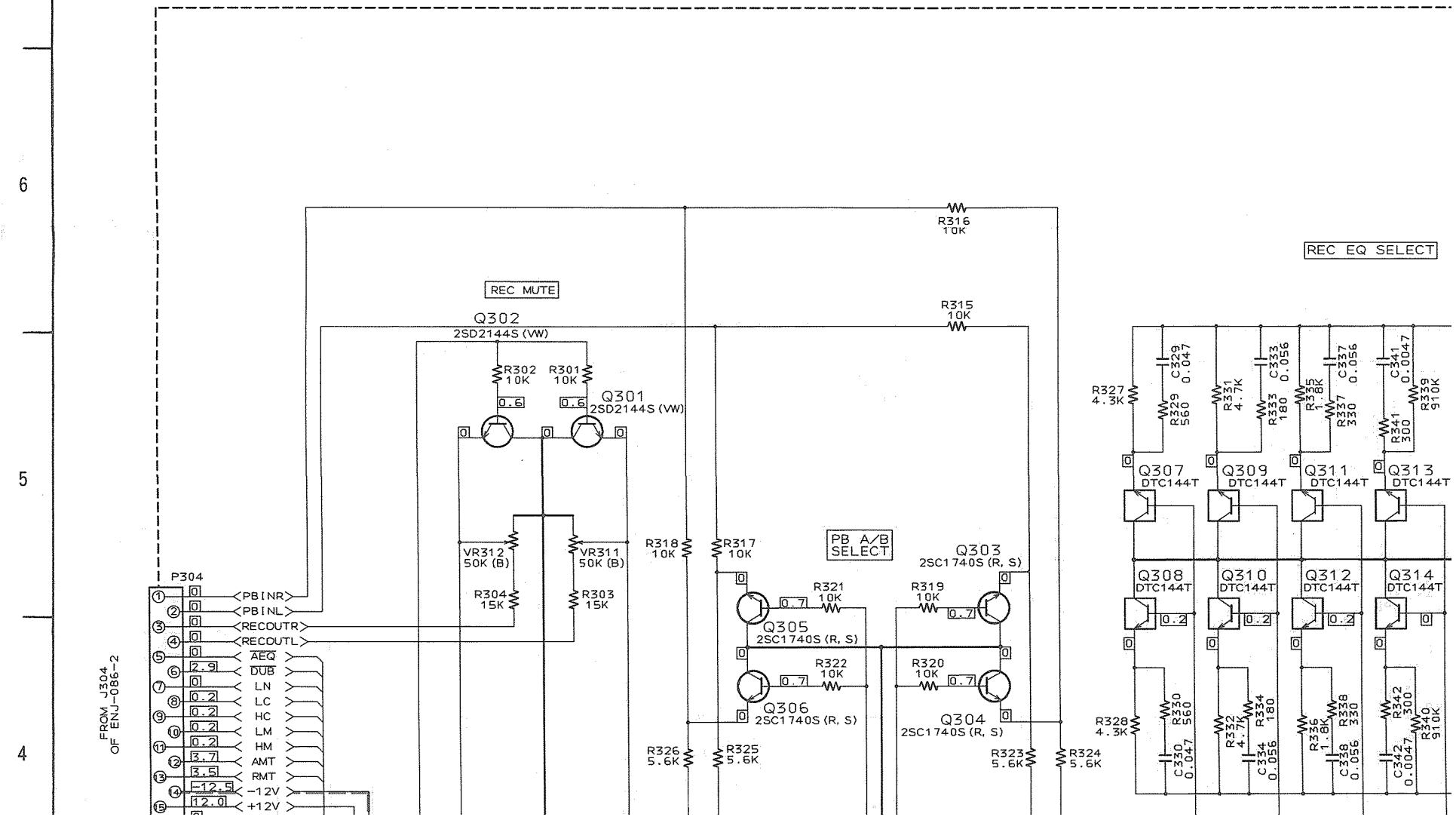
P2-26-a P2-26-b

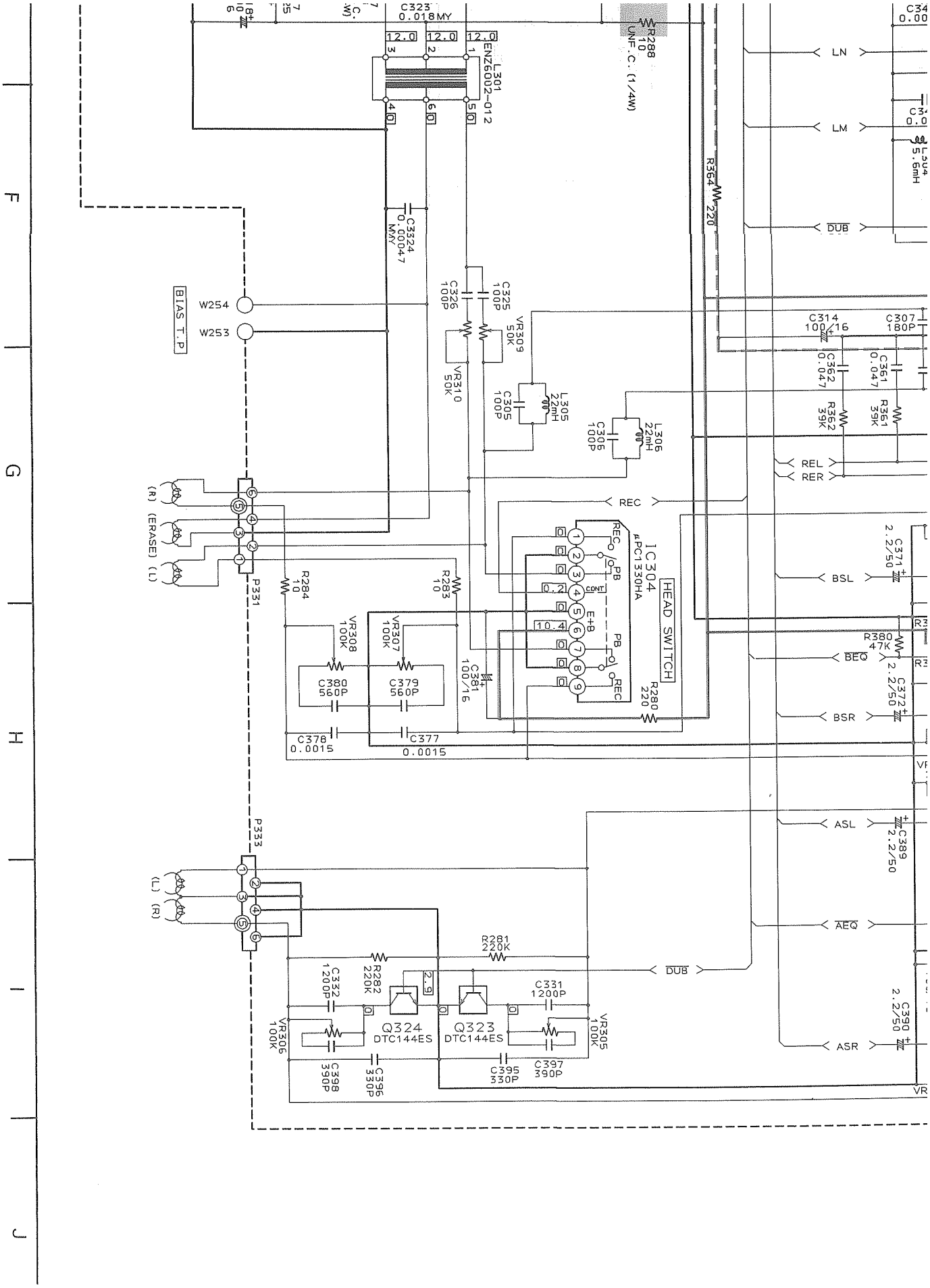


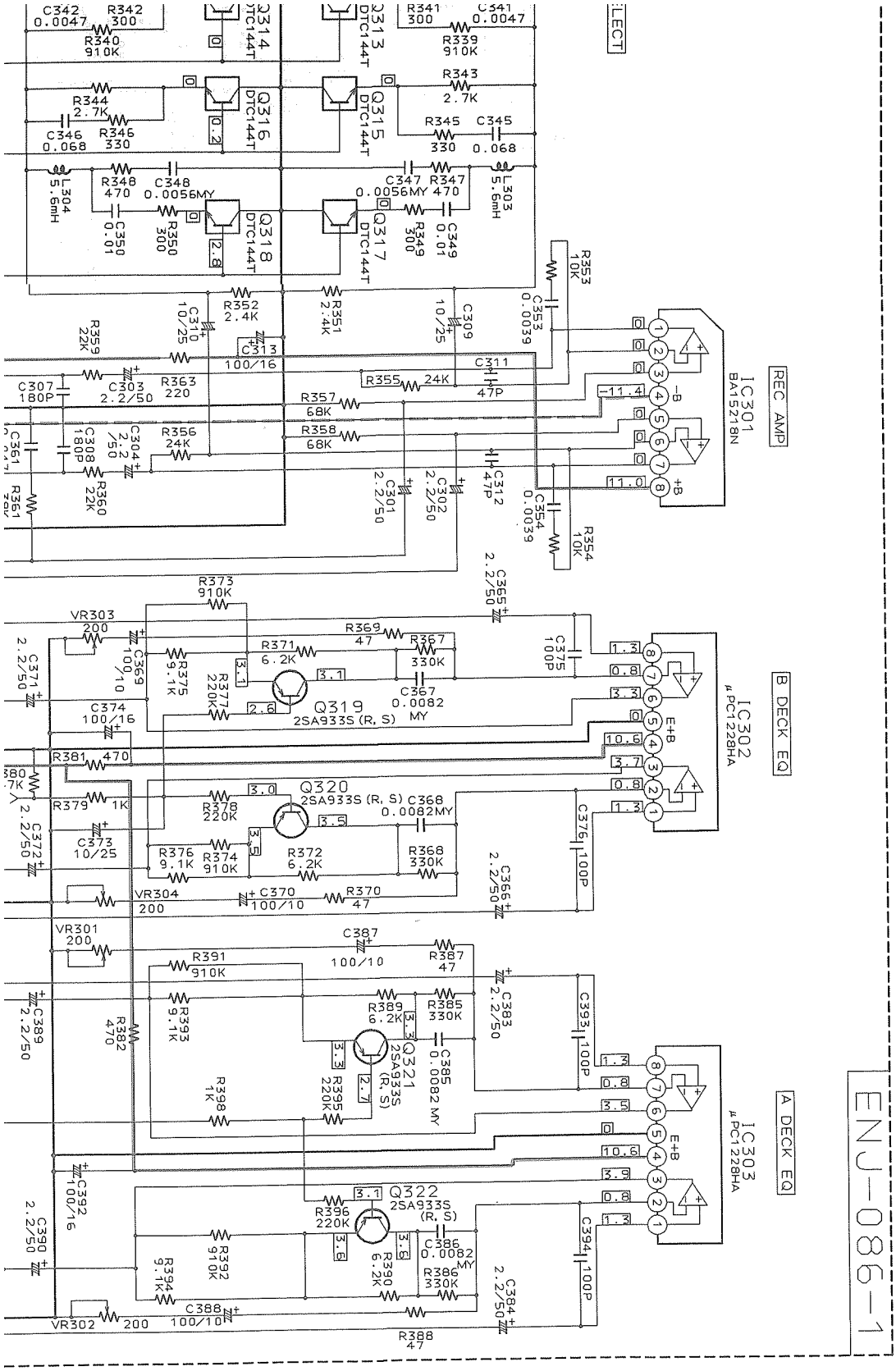
P2-26-c P2-26-d


FROM J303
OF ENJ-086-2
P303
B.GND
A.GND
BIAS
BMT
BEQ
REC
+12V
-12V
RMT
AMT
RMT
RER
REL
BSR
BSL
5.6K
BIAS
BMT
AMT
HM
LM
D301
1SS119
D302
1SS119
R297
2.2K
R295
3.3K
C315
1/50
R296
100K
Q325
2SC1740S (R, S)
Q326
2SC1740S (R, S)
Q327
2SC1740S (R, S)
Q332
DTC144ES
R290
3.3K
R294
560
R293
510
R292
220
R291
910
BIAS OSC
R289
10K
ASL
ASR
BEQ
HC
LC
HM
LN
C320
0.0068MY
C321
0.0033 MY
C322
0.0033
MY
R285
39K
R286
39K
Q329
2SC1740S
(R, S)
Q328
2SC1740S
(R, S)
C316
1/50
C317
10/25
C318
100
/16
R287
6.8
UNF.C.
(1/4W)
C323
0.018MY
R288
10
UNF.
1
2
3
4
5
6
7
A
B
C
D
E

(4) Cassette Deck Section




C323 0.018MY
L301 ENZ6002-012
R288 10 UNF.C. (1/4W)
R364 220
C3324 0.0047 MY
C326 100P
C325 100P
VR309 50K
VR310 50K
C305 100P
L305 22mH
C306 100P
L306 22mH
BIAS T.P
W254
W253
P331
(R)
(ERASE)
(L)
R284 10
R283 10
VR308 100K
VR307 100K
C380 560P
C379 560P
C381 100/16
C378 0.0015
C377 0.0015
IC304 μPC1330HA
HEAD SWITCH
R280 220
REC
PB
E+B
0.2
10.4
LN
LM
DUB
REL
RER
BSL
BEQ
BSR
ASL
AEQ
ASR
C314 100/16
C307 180P
C362 0.047
C361 0.047
R362 39K
R361 39K
C371 2.2/50
R380 47K
C372 2.2/50
C389 2.2/50
C390 2.2/50
P333
(L)
(R)
R281 220K
R282 220K
C332 1200P
C331 1200P
Q324 DTC144ES
Q323 DTC144ES
VR306 100K
VR305 100K
C398 390P
C396 330P
C395 330P
C397 390P
F
G
H
I
J


REC AMP
IC301
BA15218N
B DECK EQ
IC302
μPC1228HA
A DECK EQ
IC303
μPC1228HA
Q319
2SA933S (R, S)
Q320
2SA933S (R, S)
Q321
2SA933S (R, S)
Q322
2SA933S (R, S)
ENJ-086-1

XT-C770/C990S

— Contents —

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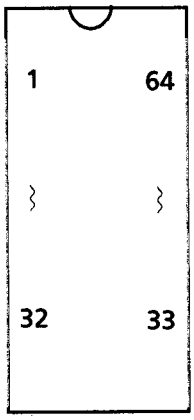
Description of Major LSIs

■ MN171602J5R (IC790) : TUNER SYSTEM CONTROLLER

1. Terminal Layout



2. Key Matrix

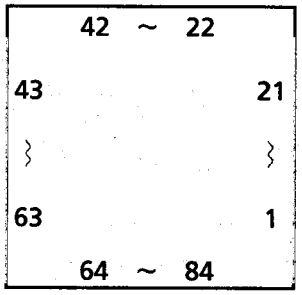
	KEY IN 0	KEY IN 1	KEY IN2	KEY IN3
KEY OUT 0	—	DAILY	REC	SLEEP
KEY OUT 1	HOUR	MINUTE	CLOCK ADJ	MEMORY
KEY OUT 2	UP	DOWN	PRESET UP	PRESET DOWN
KEY OUT 3	FM	AM	VOLUME POSITON	SOURCE /RECTIME

3. Description

Pin No.	symbol	I/O	Description	Pin No.	symbol	I/O	Description
1	VDD	--	Power supply	33	KO1	O	Key matrix output
2	S20	O	FL segment control output	34	KO2	O	Key matrix output
3	S19	O	FL segment control output	35	KO3	O	Key matrix output
4	S18	O	FL segment control output	36	KI0	I	Key matrix input
5	S17	O	FL segment control output	37	KI1	I	Key matrix input
6	S16	O	FL segment control output	38	KI2	I	Key matrix input
7	S15	O	FL segment control output	39	KI3	I	Key matrix input
8	S14	O	FL segment control output	40	/COMCLK	O	Communication clock to CD μ-com
9	S13	O	FL segment control output	41	/COMDATA	O	Communication data to CD μ-com
10	S12	O	FL segment control output	42	/COMRDY	O	Communication ready to CD μ-com
11	S11	O	FL segment control output	43	/RST	I	Reset signal input
12	S10	O	FL segment control output	44	/INH	I	Inhibit signal for tuner controller
13	S9	O	FL segment control output	45	/STEREO	I	For the indication "STEREO"
14	S8	O	FL segment control output	46	/TUNED	I	For the indication "TUNED"
15	S7	O	FL segment control output	47	IF DATA	I	Data from PLL synthesizer
16	S6	O	FL segment control output	48	TU DATA	O	Data for PLL synthesizer
17	S5	O	FL segment control output	49	CK	O	Clock for PLL synthesizer
18	−BP	--	Power supply for FL display	50	CE	O	Chip enable signal for PLL synthesizer
19	S4	O	FL segment control output	51	MUTE	O	Muting tuner sound
20	S3	O	FL segment control output	52	/DCS IN	I	Compulink signal input
21	S2	O	FL segment control output	53	/DCS OUT	O	Compulink signal output
22	S1	O	FL segment control output	54	f out	O	Clock frequency
23	G9	O	FL grid control output	55	TEST	--	Test mode terminal
24	G8	O	FL grid control output	56	CS0	I	Chip select. L: , H:
25	G7	O	FL grid control output	57	CS1	I	Chip select. L: , H:
26	G6	O	FL grid control output	58	CS2	I	Chip select. L:10k, H:9k
27	G5	O	FL grid control output	59	CS3	I	Chip select. L:24H, H:12H
28	G4	O	FL grid control output	60	X1	--	Connected to GND
29	G3	O	FL grid control output	61	X2	--	Not used
30	G2	O	FL grid control output	62	VSS	--	GND
31	G1	O	FL grid control output	63	OSC2	I/O	Clock oscillation terminal
32	KO0	O	Key matrix output	64	OSC1	I/O	Clock oscillation terminal

■ MN172412J5N2 (IC780) : CD SYSTEM CONTROLLER

1. Terminal Layout



2. Key Matrix

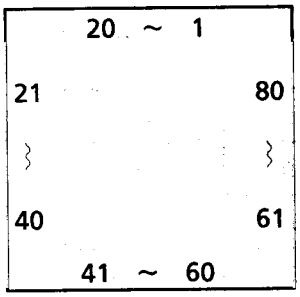
	KEY IN 0	KEY IN 1	KEY IN2	KEY IN3
KEY OUT 1	1	2	3	4
KEY OUT 2	5	6	7	8
KEY OUT 3	9	10	+10	—
KEY OUT 4	DOOR O/C	D5	D6	—
KEY OUT 5	EDIT	INTRO	CALL	P.MODE
KEY OUT 6	—	—	SIDE A/B	■/CANCEL
KEY OUT 7	D1	D2	P1	▶/II
KEY OUT 8	D4	EJECT	P1 O/C	D3

3. Description

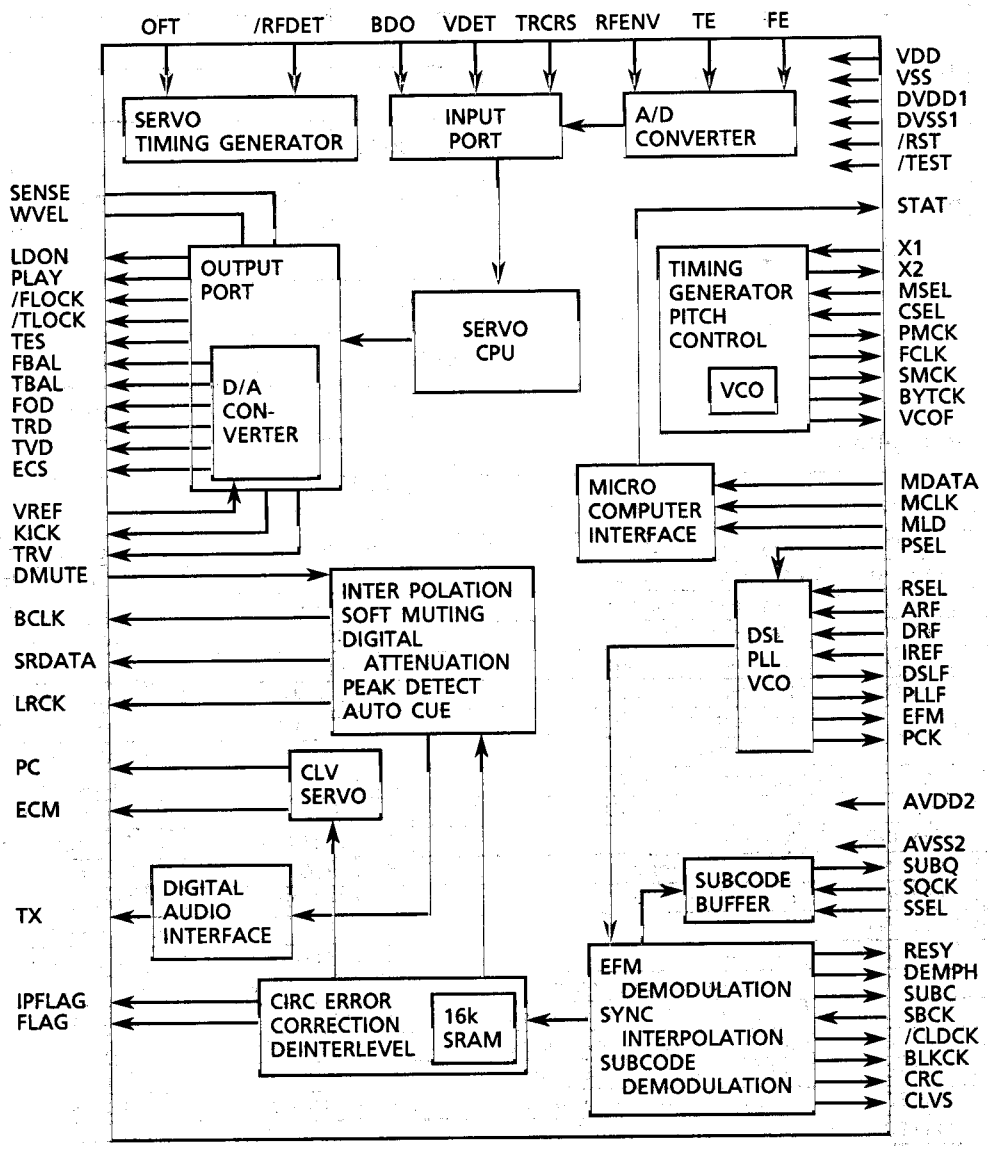
Pin No.	symbol	I/O	Description	Pin No.	symbol	I/O	Description
1	KEY OUT3	O	Key matrix output	43	MDATA	O	µ-com command data output
2	KEY OUT4	O	Key matrix output	44	P.OFF	O	H : power off, L : power on.
3	KEY OUT5	O	Key matrix output	45	SQCK	O	80-bit Sub Q and 16-bit PCM Peak Level Data
4	KEY OUT6	O	Key matrix output	46	SUBQ	I	Sub-code Q-code input
5	KEY OUT7	O	Key matrix output	47	MLD	O	µ-com command load signal output
6	KEY OUT8	O	Key matrix output	48	STATUS	I	Status signal input
7		--	Connected to GND	49	/TLOCK	I	Lock signal for Tracking
8		--	Connected to GND	50	/FLOCK	I	Lock signal for Focus
9	DGT13	--	Connected to GND	51	TCIA	--	Connected to GND
10	TEST	I	Connected to GND	52	IRQ2	I	Communication ready from TUNER µ-com
11	KEY IN0	I	Key matrix input	53	COM CLK	O	Communication clock from TUNER µ-com
12	KEY IN1	I	Key matrix input	54	TBLO	O	Communication data from TUNER µ-com
13	KEY IN2	I	Key matrix input	55	DCS IN	I	Compulink signal input
14	KEY IN3	I	Key matrix input	56	DCS OUT	O	Compulink signal output
15	PLAY LED	--	Not used	57	OPEN/LOAD	O	P1 Open or Load
16	P1 LED	O	P1 indicator signal output	58	CLOSE/UNLOAD	O	P1 Close or Unload driving control signal
17	D1 LED	O	DISC1 indicator signal output	59	SD	O	Load drive speed down output
18	D2 LED	O	DISC2 indicator signal output	60	/PU REST	I	Pick up rest switch input
19	D3 LED	O	DISC3 indicator signal output	61	/LOAD SW	I	Disc load detect signal
20	D4 LED	O	DISC4 indicator signal output	62	/JAB SW	I	JAB switch signal
21	D5 LED	O	DISC5 indicator signal output	63	/MAG IN SW	I	Magazine in signal
22	D6 LED	O	DISC6 indicator signal output	64	UP	O	Lifter driving control signal
23		--	Connected to GND	65	DOWN	O	Lifter driving control signal
24		--	Connected to GND	66	SCL	I	Serial clock input
25		--	Connected to GND	67	SDA	I	Serial data input
26		--	Connected to GND	68	RESET	I	Reset signal input
27		--	Connected to GND	69	X1	--	Connected to GND
28		--	Connected to GND	70	X2	--	Not used
29		--	Connected to GND	71	VSS	--	GND
30		--	Connected to GND	72	OSC2	O	Clock oscillation output
31		--	Connected to GND	73	OSC1	I	Clock oscillation input
32		--	Connected to GND	74	VDD	--	Power supply
33		--	Connected to GND	75	PHOTO SW	I	Photo diode switch
34		--	Connected to GND	76		--	Connected to GND
35		--	Connected to GND	77	/CLOSE SW	I	"L" with tray closed
36		--	Connected to GND	78	/OPEN SW	I	"L" with tray opened
37	MS0	I	Mode select	79	/FD CLOSE SW	I	"L" with Front Door closed
38	MS1	I	Mode select	80	/FD OPEN SW	I	"L" with Front Door opened
39	SED15	--	Connected to GND	81	DGT25	I	Reset signal input
40	/RST	O	System Reset signal output	82	DGT24	--	Connected to GND
41	MCLK	O	µ-com command clock signal output	83	KEY OUT1	O	Key matrix output
42	SENSE	I	SENSE signal input	84	KEY OUT2	O	Key matrix output

■ MN662720RB (IC650) : DIGITAL SERVO & DIGITAL SIGNAL PROCESSER

1. Terminal Layout



2. Block Diagram

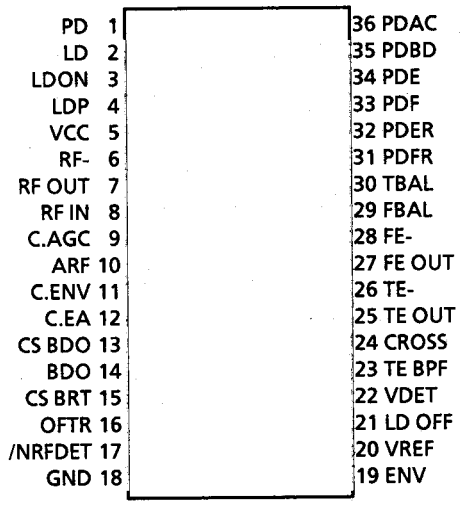


3. Description

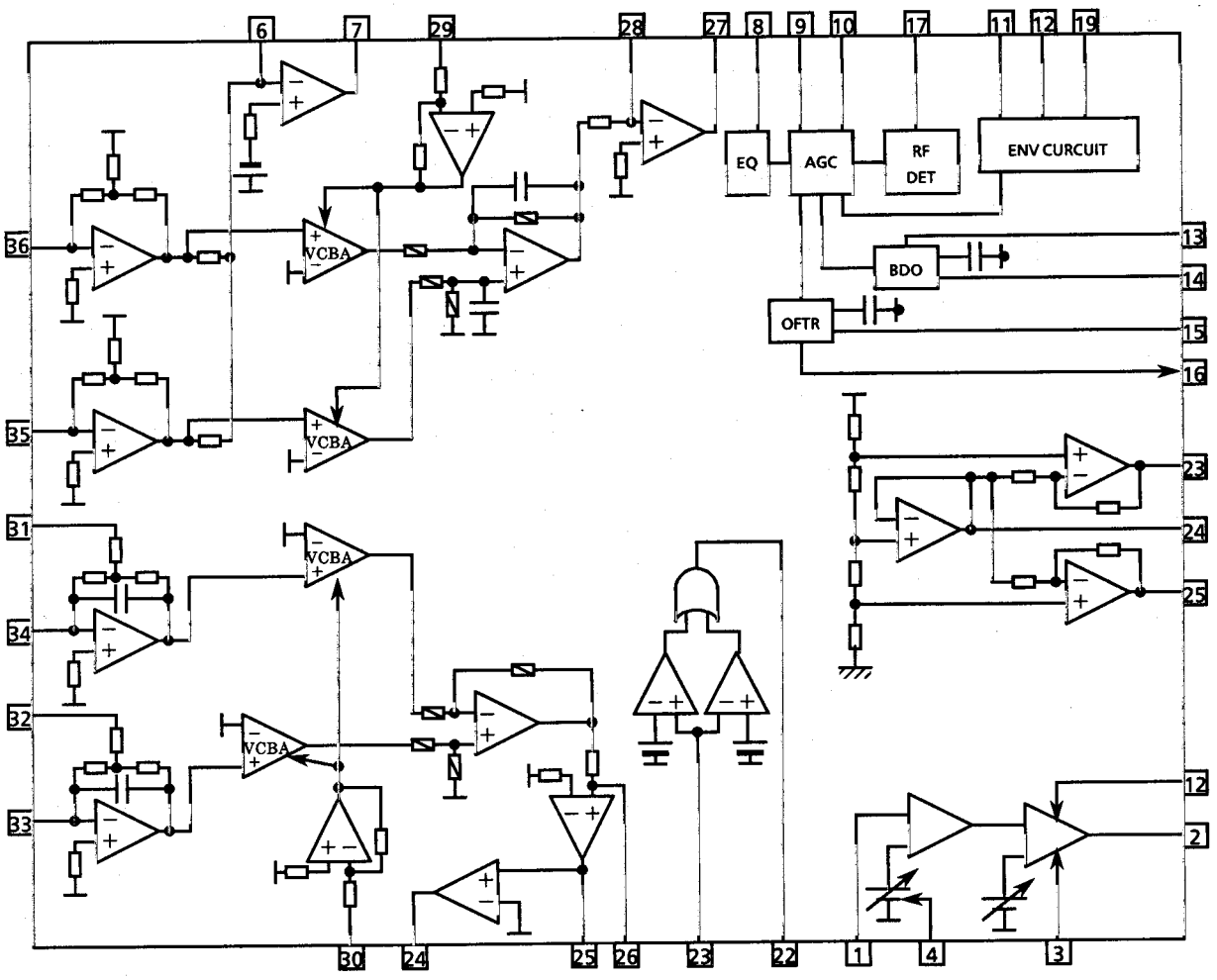
Pin No.	symbol	I/O	Description	Pin No.	symbol	I/O	Description
1	BCLK	O	Bit clock output pin for SRDATA	41	TES	—	Not used
2	LRCK	O	L/R distinction signal	42	PLAY	—	Not used
3	SRDATA	O	Serial data output	43	WVEL	—	Not used
4	DVDD1	—	Power supply	44	ARF	I	RF signal input
5	DVSS1	—	Connected to GND	45	IREF	I	Reference current input pin
6	TX	O	Digital audio interface signal	46	DRF	I	Bias adjustment pin for DSL
7	MCLK	I	µ-com command clock signal input	47	DSLF	I/O	Loop filter pin for DSL
8	MDATA	I	µ-com command data input	48	PLLF	I/O	Loop filter pin for PLL
9	MLD	I	µ-com command load signal input	49	VCOF	—	Not used
10	SENSE	O	Sense signal output	50	AVDD2	—	Power supply
11	FLOCK	O	Lock signal for Tracking	51	AVSS2	—	Connected to GND
12	TLOCK	O	Lock signal for Focus	52	EFM	—	Not used
13	BLKCK	—	Not used	53	PCK	—	Not used
14	SQCK	I	Clock for sub-code Q resister	54	PDO	—	Not used
15	SUBQ	O	Sub-code Q-code output	55	SUBC	—	Not used
16	DMUTE	I	Muting input (H : MUTE)	56	SBCK	—	Not used
17	STATUS	O	Status signal	57	VSS	—	Connected to GND
18	/RST	I	Reset signal input (L:Reset)	58	X1	I	Input of 16.9344MHz X'tal oscillation circuit
19	SMCK	—	Not used	59	X2	—	Not used
20	PMCK	—	Not used	60	VDD	—	Power supply
21	TRV	O	Traverse enforced output	61	BYTCK	—	Not used
22	TVD	O	Traverse drive output	62	CLDCK	—	Not used
23	PC	—	Not used	63	FCLK	—	Not used
24	ECM	O	Spindle motor drive signal (Enforced output) 3-State	64	IPPLAG	—	Not used
25	ECS	O	Spindle motor drive signal (Servo signal)	65	FLAG	—	Not used
26	KICK	O	Kick pulse output	66	CLVS	—	Not used
27	TRD	O	Tracking drive output	67	CRC	—	Not used
28	FOD	O	Focus drive output	68	DEMPH	O	De-emphasis ON signal (H : ON)
29	VREF	I	Reference voltage input pin	69	RESY	—	Not used
30	FBAL	O	Focus Balance adjust signal output	70	NC1	—	Connected to GND
31	TBAL	O	Tracking Balance adjust signal output	71	/TEST	—	Pull up (+5V)
32	FE	I	Focus error signal input	72	AVDD1	—	Power supply
33	TE	I	Tracking error signal input	73	NC2	—	Not used
34	RF ENV	I	RF envelope signal input	74	AVSS1	—	Connected to GND
35	VDET	I	Vibration detect signal input	75	NC3	—	Not used
36	OFT	I	Off track signal input	76	RSEL	—	Pull up (+5V)
37	TRCRS	I	Track cross signal input	77	CSEL	—	Connected to GND
38	/RFDET	I	RF detect signal input	78	PSEL	—	Connected to GND
39	BDO	I	BDO input pin	79	MSEL	—	Connected to GND
40	LDON	O	Laser ON signal output	80	SSEL	—	Pull up (+5V)

■ AN8806SB (IC600) : RF & SERVO AMP

1. Terminal Layout



2. Block Diagram

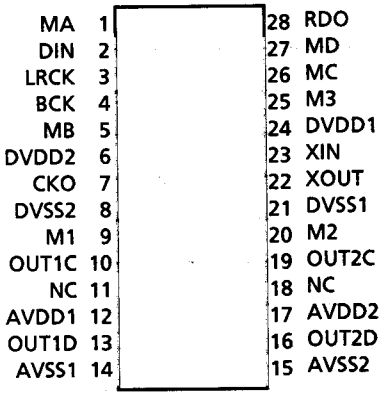


3. Description

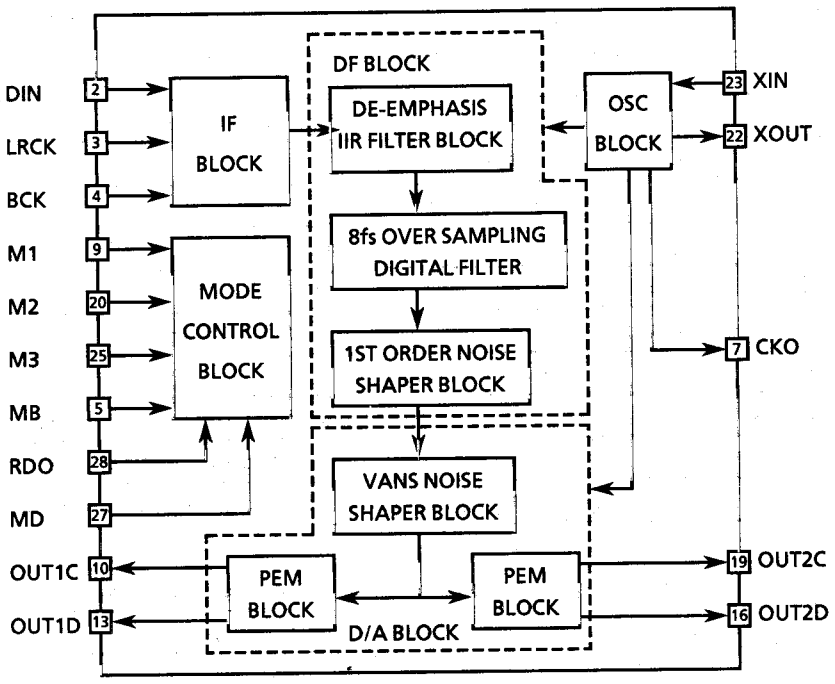
Pin No.	Symbol	I/O	Description
1	PD	I	APC amp input pin
2	LD	O	APC amp output pin
3	LD ON	I	APC ON/OFF control pin
4	LDP	--	Connected to GND
5	VCC	--	Power supply
6	RF-	I	Inverse input pin for RF amp
7	RF OUT	O	RF amp output pin
8	RF IN	I	AGC input pin
9	C.AGC	I/O	Connecting pin of AGC loop filter
10	ARF	O	AGC output pin
11	C.ENV	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
12	C.EA	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
13	CS BDO	I/O	A capacitor is connected to detect the lower envelope of the RF signal
14	BDO	O	BDO output pin
15	CS BRT	I/O	A capacitor is connected to detect the lower envelope of the RF signal
16	OFTR	O	Of-track status signal output pin
17	/NRFDET	O	RF detection signal output pin
18	GND	--	GND
19	ENV	O	Envelope output
20	VREF	O	Reference voltage output pin
21	LD OFF	--	Connect to GND
22	VDET	O	Vibration detection signal output pin
23	TE BPF	I	Input pin of tracking error through BPF
24	CROSS	O	Tracking error cross output pin
25	TE OUT	O	Tracking error signal output pin
26	TE-	I	Inverse input pin for tracking error amp
27	FE OUT	O	Output pin of focus error
28	FE-	I	Inverse input pin for focus error amp
29	FBAL	I	Focus balance control pin
30	TBAL	I	Tracking balance control pin
31	PDFR	I/O	E and E I-V amp gain control pin
32	PDER	I/O	F and E I-V amp gain control pin
33	PDF	I	I-V amp input pin
34	PDE	I	I-V amp input pin
35	PD BD	I	I-V amp input pin
36	PD AC	I	I-V amp input pin

■ MN35503 (IC750) : D / A CONVERTER

1. Terminal Layout



2. Block Diagram

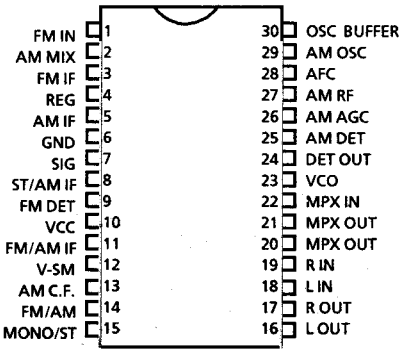


3.Description

Pin No	Symbol	I/O	Description	Pin No	Symbol	I/O	Description
1	MA	--	Connected to ground	15	AVSS2	--	Analog ground 2
2	DIN	I	Data input	16	OUT2D	O	2D PEM output
3	LRCK	I	LR clock input	17	AVDD2	--	Analog power supply 2
4	BCK	I	Bit clock input	18	NC	--	Non connection
5	MB	I	De-emphasis ON signal	19	OUT2C	O	2C PEM output
6	DVDD2	--	Digital power supply 2	20	M2	--	Connected to ground
7	CKO	I	Clock output	21	DVSS1	--	Digital ground pin 1
8	DVSS2	--	Digital ground 2	22	XOUT	O	Crystal oscillator output
9	M1	--	Connected to ground	23	XIN	I	Crystal oscillator input
10	OUT1C	O	1C PEM output	24	DVDD1	--	Digital power supply 1
11	NC	--	Non connection	25	M3	--	Connected to ground
12	AVDD1	--	Analog power supply 1	26	MC	--	Connected to ground
13	OUT1D	O	1D PEM output	27	MD	I	Reset signal / Digital Att. control signal input
14	AVSS1	--	Analog ground 1	28	RDO	--	Not used

■ LA1836M (IC102) : FM AM IF AMP & detector, FM MPX Decorder

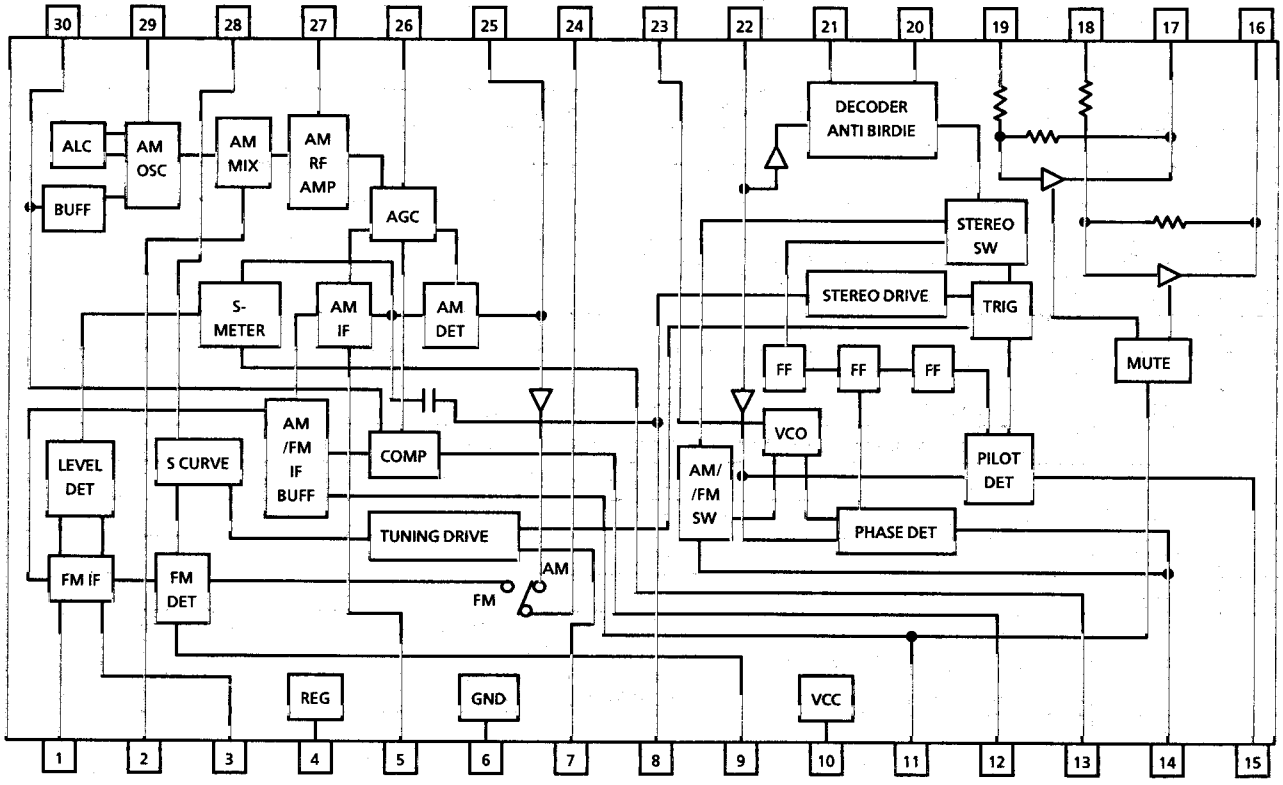
1. Terminal Layout



3. Pin Function

Pin No.	Symbol	I/O	Function
1	FM IN	I	This is an input terminal of FM IF Signal.
2	AM MIX	O	This is an output terminal for AM mixer.
3	FM IF	I	Bypass of FM IF
4	REG	—	Register value between pin4 and pin28 desides the frequency width of the input signal.
5	AM IF	I	Input of AM IF Signal.
6	GND	—	This is the device ground terminal.
7	SIG	O	When the set is tunning, this terminal becomes "L".
8	ST/AM IF	O	Stereo indicator output. Stereo : "L", Mono : "H"
9	FM DET	—	FM detect transformer.
10	VCC	—	This is the power supply terminal.
11	FM/AM IF //MUTE	O/I	When the signal of IF REQ of IC121(LC7218JM) appear, the signal of FM/AM IF output. //Muting control input.
12	VSM	O	S Meter output and adjust AM SD sensitivity.
13	AM C.F.	O	This is a terminal of AM ceramic filter.
14	FM/AM	I	Change over the FM / AM input. "H" : FM, "L" : AM
15	MONO/ST	O	Stereo : "H", Mono : "L"
16	L OUT	O	Left channel signal output.
17	R OUT	O	Right channel signal output
18	L IN	I	Input terminal of the Left channel post AMP.
19	R IN	I	Input terminal of the Right channel post AMP.
20	MPX L OUT	O	Mpx Left channel signal output.
21	MPX R OUT	O	Mpx Right channel signal output.
22	MPX IN	I	Mpx input terminal.
23	VCO	I	Voltage controlled oscillator terminal.
24	DET OUT	O	AM/FM detection output.
25	AM DET	—	AM low cut adjustment.
26	AM AGC	I	This is an AGC voltage input terminal for AM.
27	AM RF	I	This is an input terminal for AM RF signal.
28	AFC	—	This is an output terminal of voltage for FM-AFC.
29	AM OSC	—	This is a terminal of AM Local oscillation circuit.
30	OSC BUFFER	O	AM Local oscillation Signal output.

2. Block Diagram

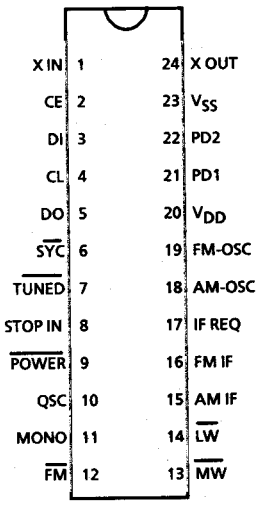


■ LC7218JM (IC121) : PLL Synthesizer

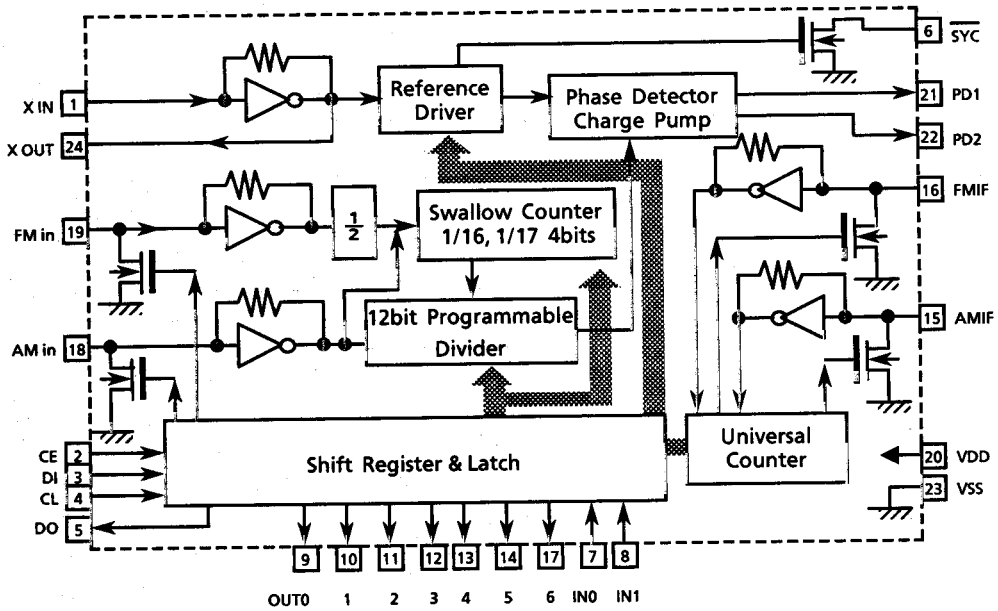
1. The main function descriptions

(1) It makes the local oscillation frequency by the control data from IC901.
(2) Decode the control signal and transmit the signal for receiving conditions.
(3) For the best tuning, count the internal-frequency and transmit the data to IC901.

2. Terminal Layout



3. Block Diagram

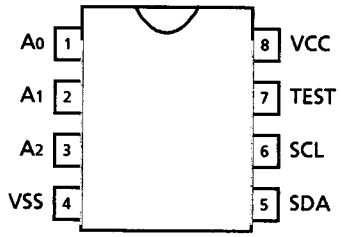


4. Pin Functions

Pin No.	Symbol	I/O	Functions
1,24	X in , X out	I/O	Crystal oscillator (7.2MHz).
2	CE	I	Fix the chip enable to "H" when inputting (DI) and outputting (DO) the serial data.
3	DI	I	Receive the control data from the controller (IC801).
4	CL	I	This clock is used to synchronize data when transmitting the data of DI and DO.
5	DO	O	Transmit the data from LC7218JM to the controller which is synchronized with CL.
6	SYC	—	Not used.
7	TUNED	I	Receive the tuned signal from IC102 (LA1836M).
8	STOP IN	—	Connected to GND
9	POWER	—	Not used.
10	QSC	—	Not used.
11	MONO	O	It is "H" on FM-monaural, "L" on FM-Stereo.
12	FM	O	It is "L" on FM mode.
13	MW	O	It is "L" on MW mode.
14	LW	O	It is "L" on LW mode.
15	AM-IF	I	Universal counter input for AM-IF from IC102 (LA1836M).
16	FM-IF	I	Universal counter input for FM-IF from IC102 (LA1836M).
17	IF REQ	O	Output the "IF-signal request" to IC102 when the pin-7 (tuned in) goes to "H".
18	AM OSC	I	Input the local oscillator signal of AM.
19	FM OSC	I	Input the local oscillator signal of FM.
20	V_{DD}	—	This is a terminal of power supply.
21	PD1	O	PLL charge pump output : When the local oscillator signal frequency is higher than the reference frequency high level signals will output. When it is lower than the reference frequency, low level signals will output. When it is same as reference frequency signals, it will be floating.
22	PD2	—	Not used.
23	Vss	—	Connected to GND

■ AT24C01A-10PC (IC782) : Serial Eeprom

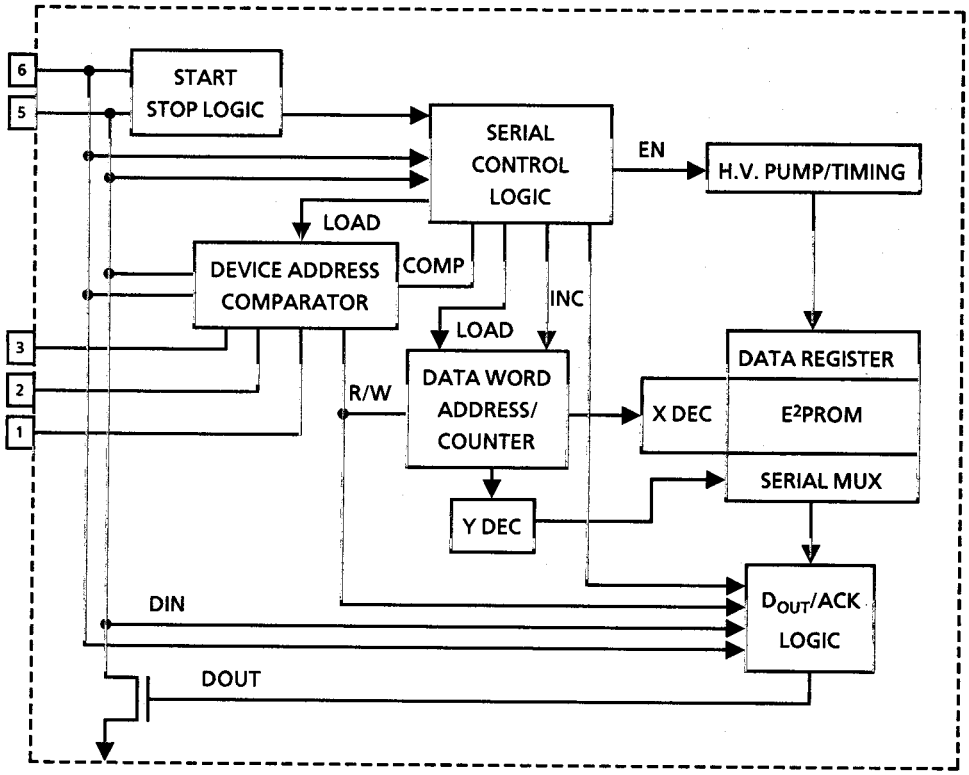
1. Terminal Layout



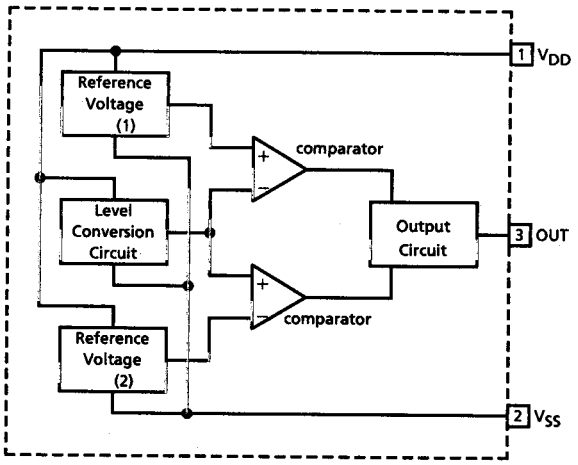
2. Terminal Functions

Pin No.	Symbol	Functions
1~3	A_0~A_2	ADDRESS INPUT (NOT USED)
4	VSS	GND
5	SDA	SERIAL DATA
6	SCL	SERIAL CLOCK
7	TEST	TEST PIN (CONNECTED TO GND)
8	VCC	POWER SUPPLY

3. Block Diagram

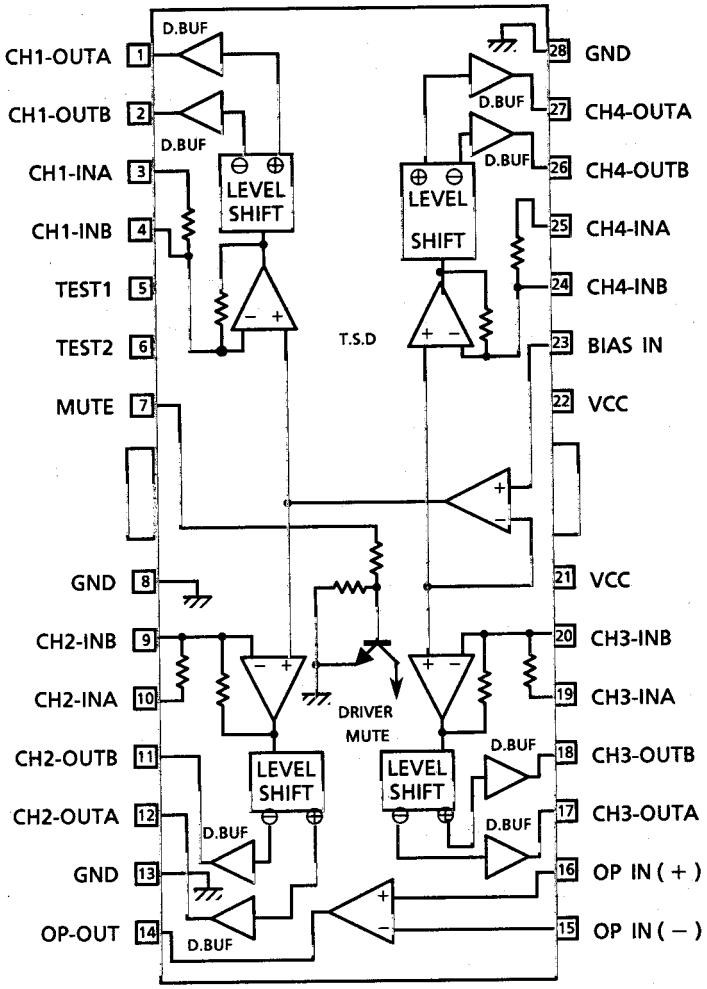


■ MN1281 (P.Q). : IC781 RESET IC



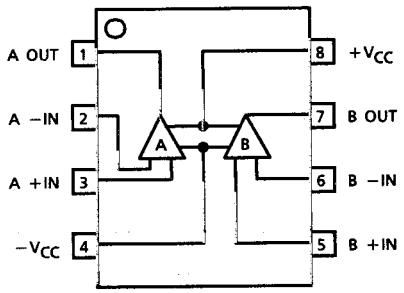
Pin No.	Pin Name	Functions
1	V_{DD}	Power supply
2	V_{SS}	Ground
3	OUT	Reset signal output : Low level is output when resetting : High level is output when cancelling the reset.

■ BA6398FP(IC700) : 4 CHANNEL DRIVER



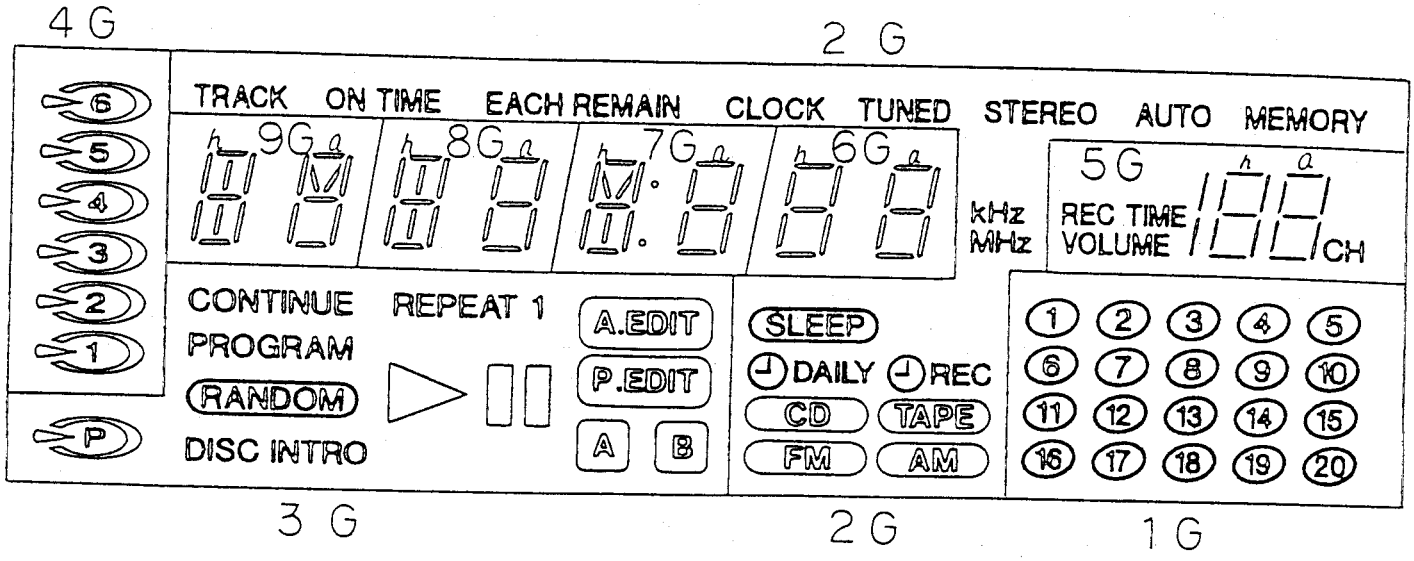
T.S.D : THERMAL SHUT DOWN
D.BUF : DRIVER BUFFER

■ VC4580L(IC720),VC4580D(IC751)
· · · Dual OP Amp.



Internal Connections of the FL Display

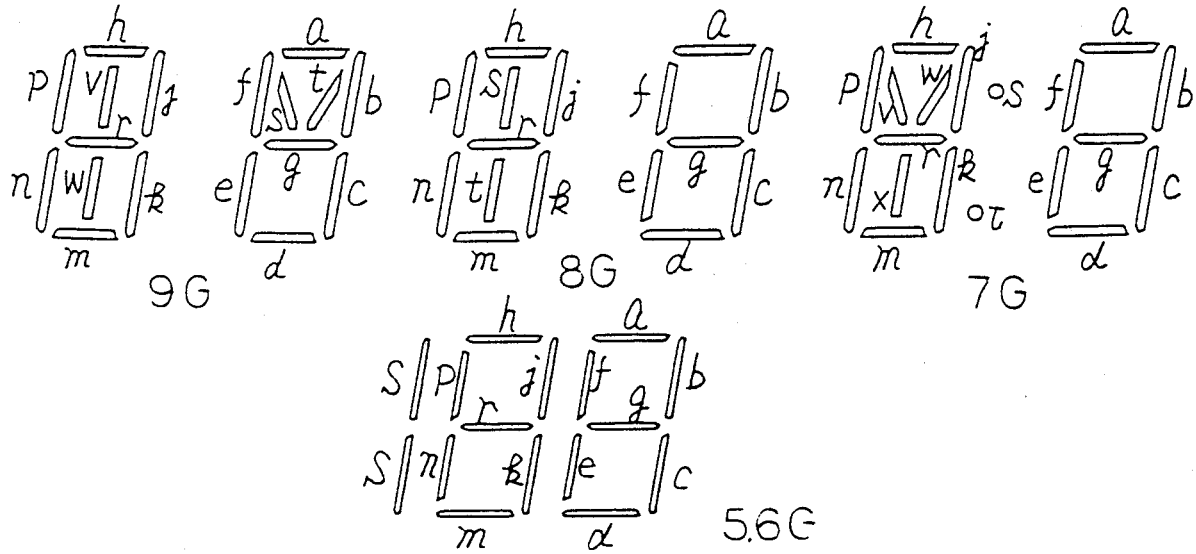
■ ELU0001-199 : FL790



Pin Connection

TERMINAL NO.	1	2	3	4	5	6	7	8	9	10	11									
ELECTRODE	F	F	F	NP	NP	P S20	P S19	P S18	P S17	P S16	P S15									
TERMINAL NO.	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
ELECTRODE	P S14	P S13	P S12	P S11	P S10	P S9	P S8	P S7	P S6	P S5	NP	P S4	P S3	P S2	P S1	NC	9G	8G	7G	6G
TERMINAL NO.										32	33	34	35	36	37	38	39	40	41	42
ELECTRODE										5G	4G	3G	2G	1G	NP	NP	NP	F	F	F

Notes F: Filament NP: No Pin
G: Grid NC: No Connection
P: Anode

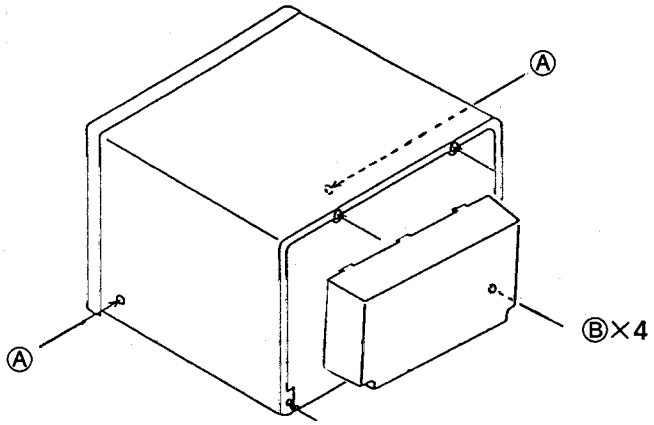


Anode Connection

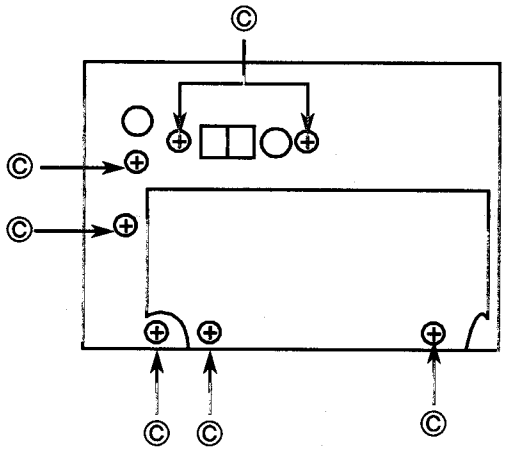
	1G	2G	3G	4G	5G	6G	7G	8G	9G
S1	①		⊃ (DISC P)		m	m	m	m	m
S2	②		▶ (DISC P)		s		x		
S3	③	SLEEP	P (DISC P)	1 (DISC 1)	n	n	n	n	n
S4	④	⊕ REC	A.EDIT	⊃ (DISC 1)			v	t	w
S5	⑤	⊕ DAILY	P.EDIT	▶ (DISC 1)	k	k	k	k	k
S6	⑥	TAPE	B	2 (DISC 2)	r	r	r	r	r
S7	⑦	CD	A	⊃ (DISC 2)	p	p	p	p	p
S8	⑧	MHz	1	▶ (DISC 2)	VOLUME		w	s	v
S9	⑨	AM	REPEAT	3 (DISC 3)	j	j	j	j	j
S10	⑩	FM	CONTINUE	⊃ (DISC 3)	h	h	h	h	h
S11	⑪	KHz	▮▮	▶ (DISC 3)	CH		s		
S12	⑫	TRACK	PROGRAM	4 (DISC 4)	d	d	d	d	d
S13	⑬	ON TIME	▶	⊃ (DISC 4)	e	e	e	e	e
S14	⑭	EACH	RANDAM	▶ (DISC 4)	c	c	c	c	c
S15	⑮	REMAIN	INTRO	5 (DISC 5)	g	g	g	g	g
S16	⑯	CLOCK	DISC	⊃ (DISC 5)	f	f	f	f	f
S17	⑰	TUNED		▶ (DISC 5)					s
S18	⑱	STEREO		6 (DISC 6)	REC TIME		t		t
S19	⑲	AUTO		⊃ (DISC 6)	b	b	b	b	b
S20	⑳	MEMORY		▶ (DISC 6)	a	a	a	a	a

Disassembly Procedures

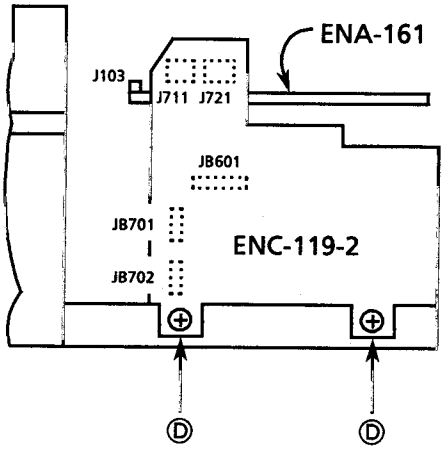
(1) Removing the top cover
1. Remove 2 screws Ⓐ fixing both sides of the top cover, and 4 screws Ⓑ fixing rear sides.
2. Remove the top cover.



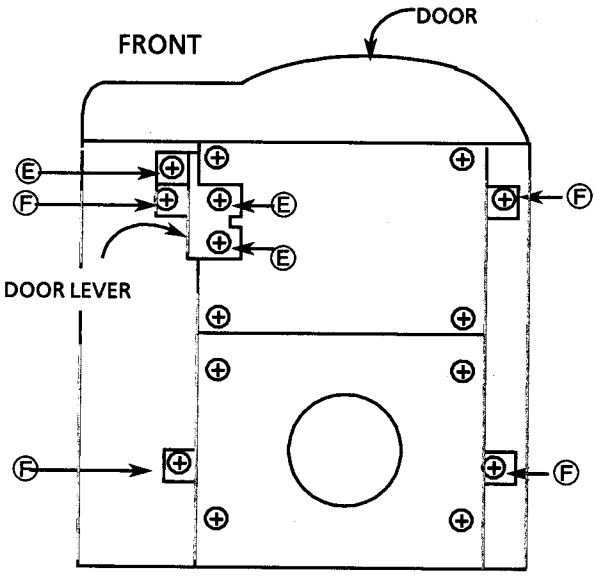
(2) Removing the Rear panel
1. Remove the top cover.
2. Remove 2 screws Ⓒ fixing the changer mech. cover.
3. Remove 5 screws Ⓒ fixing the rear panel.
4. Remove the rear panel.



(3) Removing the CD control circuit board (ENC-119-2) and Tuner circuit board (ENA-161)
1. Remove the rear panel.
2. Disconnect the connectors. (J711,J721,JB701,JB702,J103,JB601,J731)
3. Remove 2 screws Ⓓ fixing the CD control circuit board with the tuner circuit board.

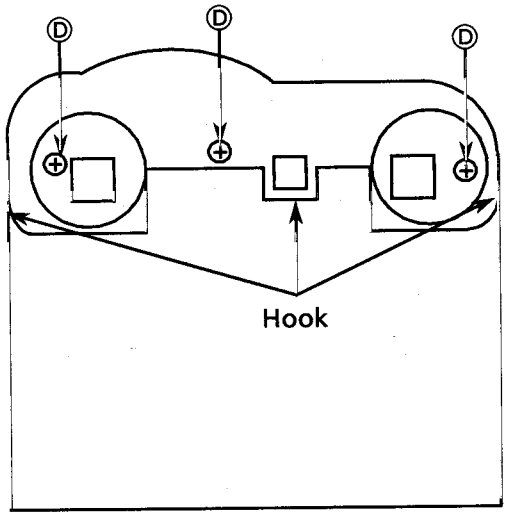


(4) Removing the Changer mech. assembly
1. Remove the CD control circuit board and tuner circuit board.
2. Remove 3 screws Ⓔ which fix the door lever and open the door halfway to remove the lever.
3. Remove 4 screws Ⓕ which fix the changer mech. assembly and lift its rear side slightly to disassemble the mech. assembly.

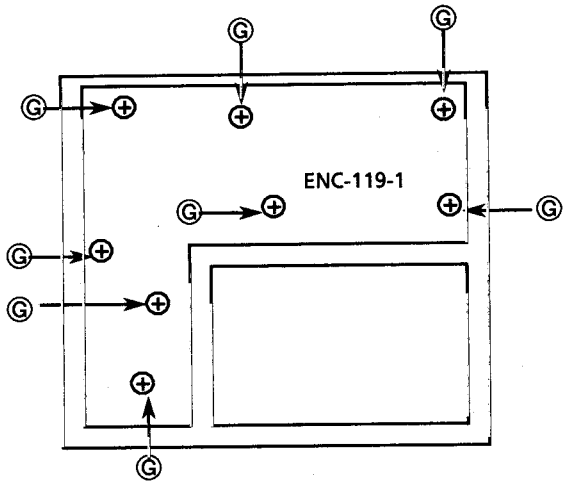


ⒶSDSG3006M ⒷGBSG3008CC ⒸE73273-003 ⒹSBSG3008CC ⒺSBSF3008Z ⒻGBSG3008CC

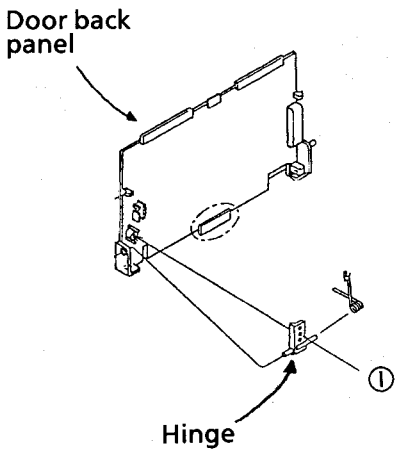
(5) Removing the Front panel assembly
1. Remove 3 screws Ⓔ fixing door lever to remove it. (Refer to Item (4))
2. Remove 3 screws Ⓓ fixing bottom of the front panel assembly.
3. Remove 3 hooks fixing the front panel assembly to remove it.

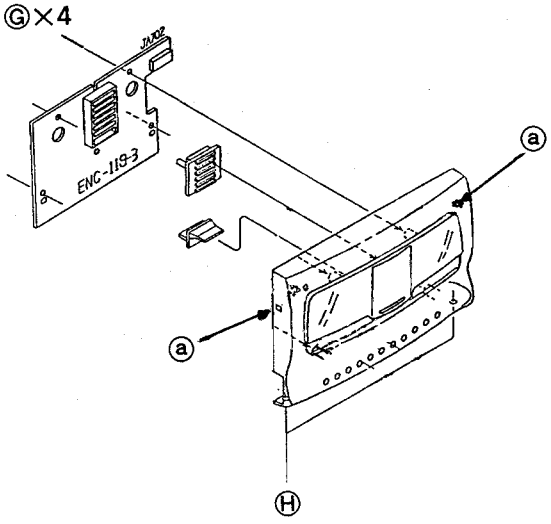


(6) Removing the Front circuit board (ENC-119-1)
1. Remove the front panel assembly.
2. Remove the 8 screws Ⓖ fixing front circuit board.
3. Remove the front circuit board.



(7) Removing the Front door indicator circuit board (ENC-119-3) and Door back panel
1. Remove the front panel assembly.
2. Remove the 2 screws Ⓗ.
3. Remove the hook by inserting a thin driver from ⓐ hole to remove the front door indicator assembly.
4. Remove a flatwire (JA702) from LED circuit board. which is secured with the door.
5. Remove the 4 screws Ⓖ fixing the front door indicator circuit board.
6. Remove the front door indicator circuit board.
7. Remove the screw Ⓘ fixing the hinge of back panel.
8. Remove the door back panel.



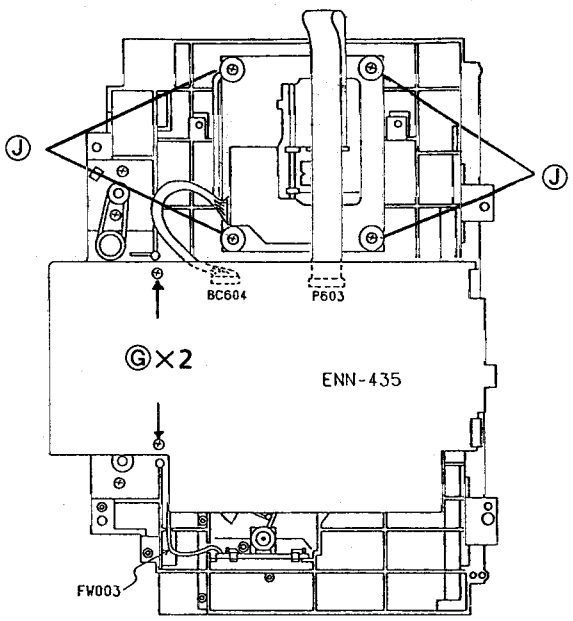


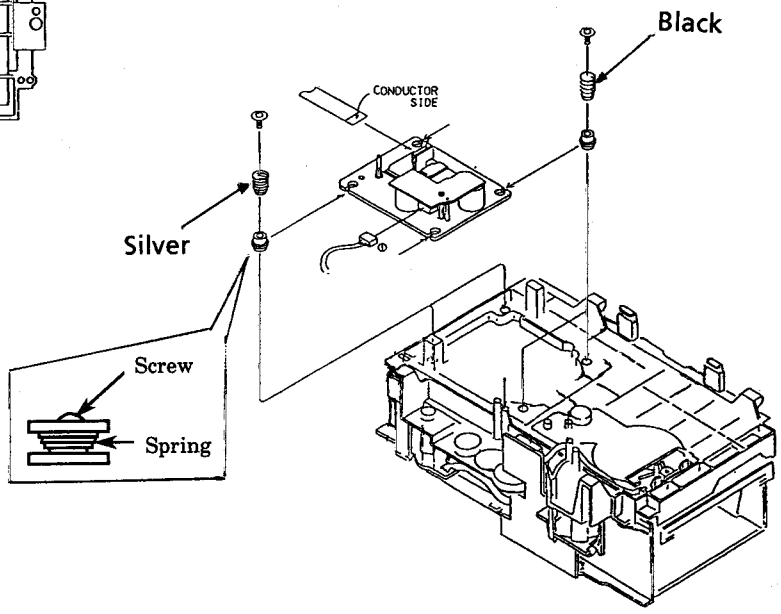
Ⓓ .. SBSG3008CC Ⓖ ... SDSF2608Z Ⓗ ... SSSF2606M Ⓘ ... SDSF2606Z

(8) Removing the CD circuit board (ENN-435)
1. Remove the changer mech. assembly.
2. Remove the 2 screws Ⓖ.
3. Disconect the conectors (P603,BC604) to the traverse mech.
4. Remove the CD circuit board (ENN-435).

(9) Removing the Traverse mech.
1. Remove the CD mech. assembly.
2. Remove the CD circuit board.
3. Remove the 4 screws Ⓙ.
4. Remove the traverse mech. assembly.

(10) Assembling traverse mech. assembly
1. Put insulators' grooves certainly into cuttings on the traverse mech..
2. Insert springs into the insulators.
3. Secure screws to fix them.



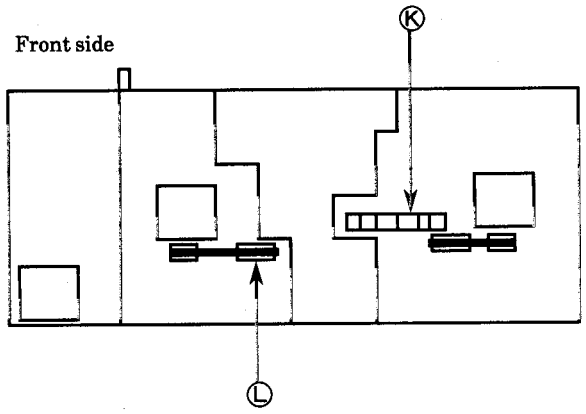


Ⓖ .. SDSF2608Z Ⓙ ... E408361-001

■ EJECTION OF DISC AND MAGAZINE IN POWER-OFF MODE

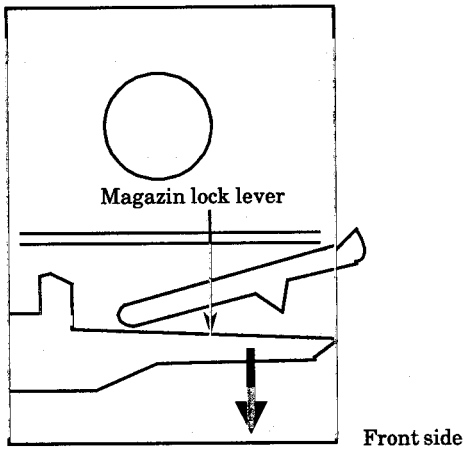
(11) Disc

1. Rotate gear Ⓚ to move the elevator to the disc's position inside the unit.
2. Turn the idler pulley Ⓛ to return the disc on the tray.
3. Lower the elevator to the bottom and rotate pulley Ⓛ to eject the P1 tray.

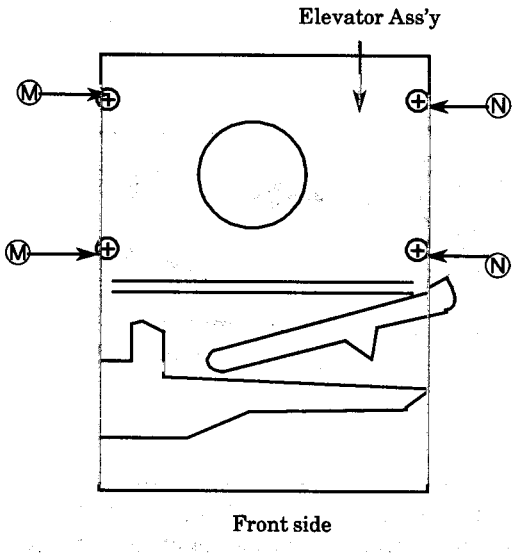


(12) Magazine

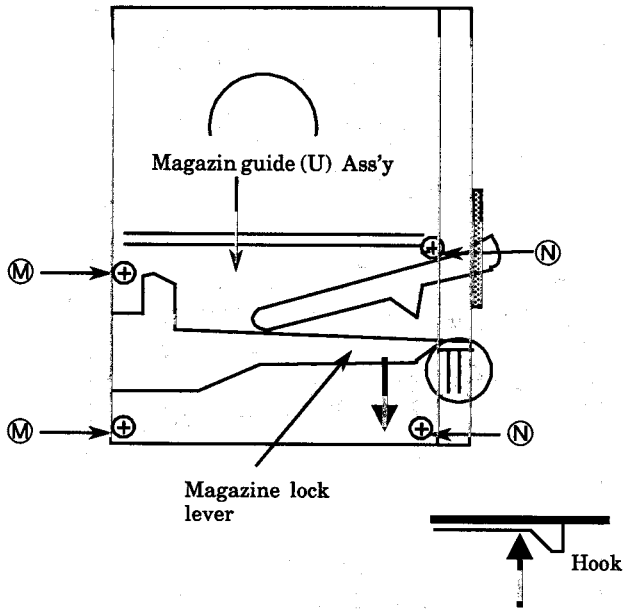
1. Return a disc into the magazine. (See the above (11).)
2. Lower the elevator to the bottom.
3. Pull a magazine lock lever which is on the changer mech. toward the front side to release the magazine lock and eject the magazine. (See an arrow in the figure.)



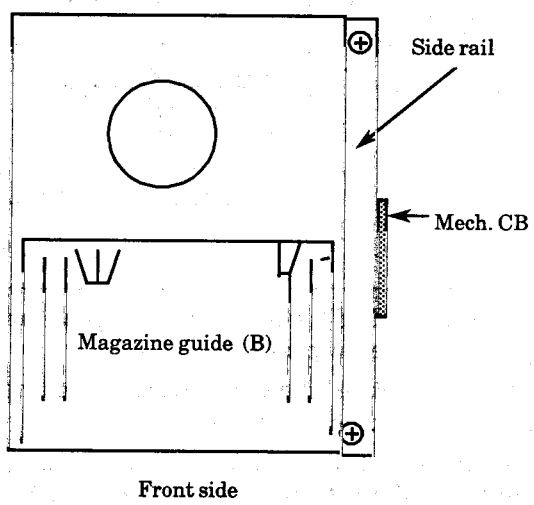
(13) Removing the Elevator assembly
1. Move the elevator assembly up side.
2. Remove the 2 screws Ⓜ and 2 screws Ⓝ.
3. Remove the elevator assembly.



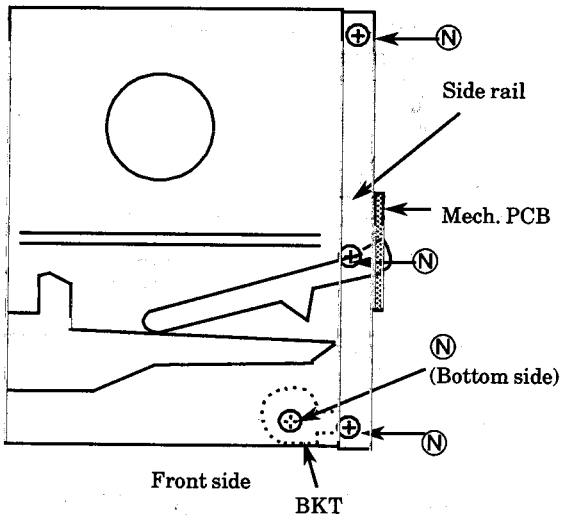
(14) Removing the Magazine guide (U)
1. Remove the 2 screws Ⓜ and 2 screws Ⓝ.
2. Push the hook up and pull the magazine lock lever toward front side to remove the magazine guide (U) from the hook. (See an arrow in the figure.)
3. Remove the magazine holder assembly.



(15) Removing the Magazine guide (B)
1. Remove the magazine guide (U) assembly.
2. Lifting the magazine guide (B) makes it release.

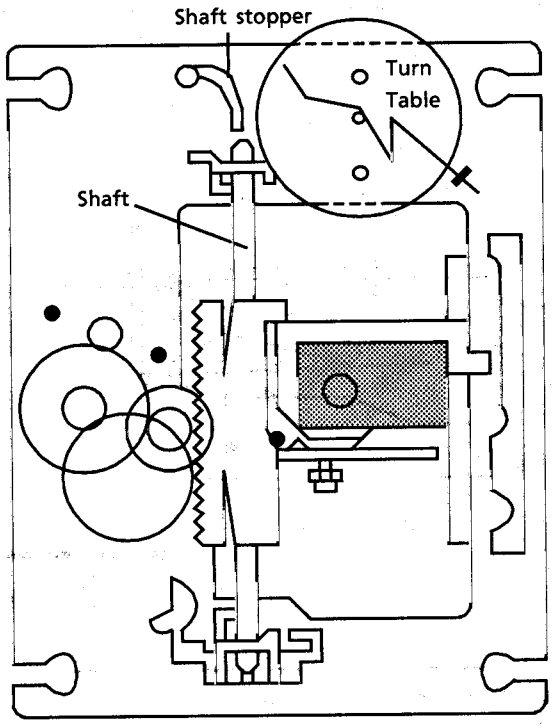


(16) Removing the Right side rail
1. Remove the elevator assembly and magazine guide (U) assembly.
2. Rotate gear Ⓚ to move the cam plate to the front side.
3. Remove the mech. circuit board of the side position.
4. Remove the 4 screws Ⓝ holding the side rail and bracket.
5. Remove the side rail.

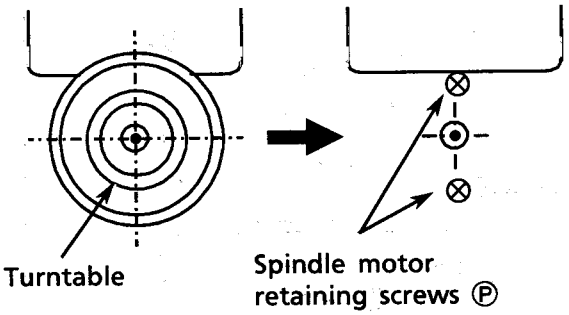


Ⓜ .. SDST2606Z Ⓝ ... SBSF2608Z

(17) Removing the Pickup
1. Remove the CD mech. assembly.
2. Release the shaft to remove the pickup.



(18) Removing the Spindle motor
1. Remove the CD mech. assembly.
2. Remove the turntable, and remove the 2 screws Ⓟ retaining the spindle motor.
3. Remove the screw retaining the spindle and feed motor circuit board and unsolder it.



(19) Spindle motor installation
1. Tighten the 2 screws to the same torque.
2. Fasten the spindle and feed motor P.C. board with the screw and solder.
3. Install the turntable.When installing, press straight down at the center of the turntable until the distance from the surface of the mech. base to the turntable is exactly 19.4±0.1mm.

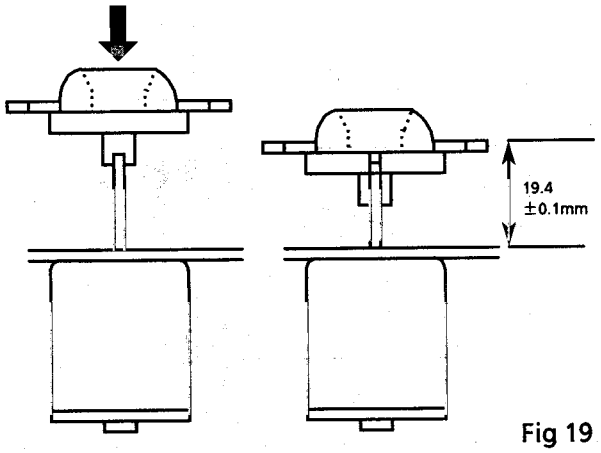
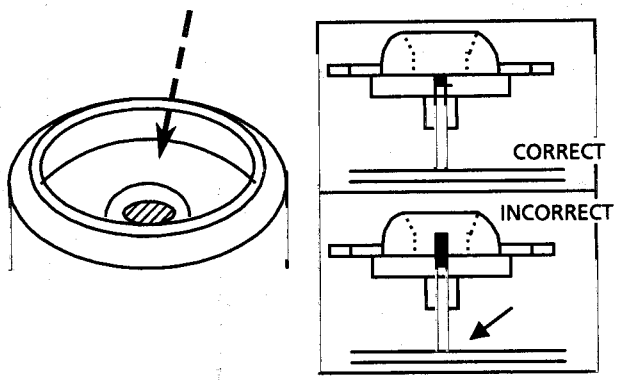


Fig 19

(20) After inserting the turntable, bond the motor shaft and turntable together (at the section marked by an arrow in fig 20 on the left below).



(21) Use "LOCKTITE" #460 bonding agent, and apply as little as possible.

Take care not to allow any excess bonding agent to get onto the turntable.

Be extremely careful not to allow bonding agent to adhere to the motor bearing (the section marked by an allow in fig 20 on the right).

Ⓟ .. SDSP2003N

Adjustment Procedures

■ Tuner section

(1) Tuning voltage

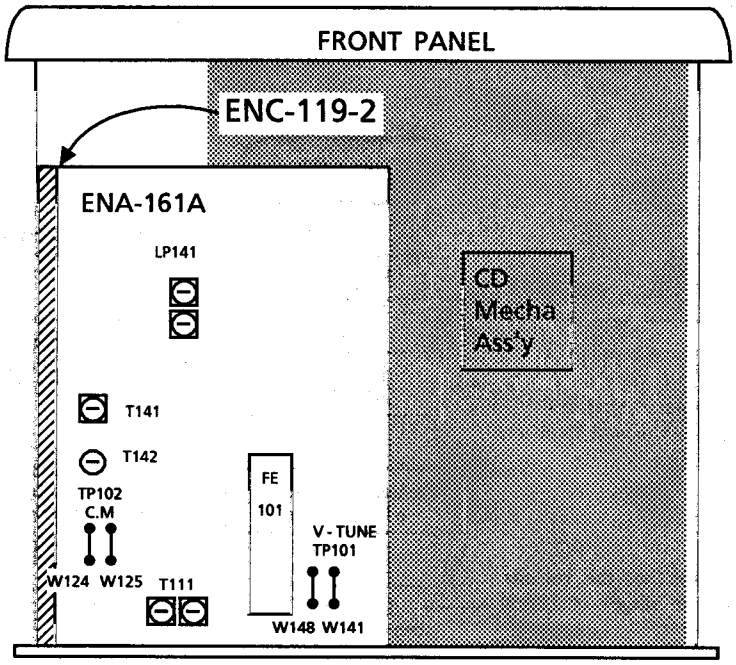
Confirm the voltages in the table below at TP101.

FM Tuning voltage (Unit : V)

Area	Frequency	
	87.5MHz	108MHz
U.S.A., Canada,	1.6±1.0 (V)	8.0±2.0 (V)

AM Tuning voltage (Unit : V)

Area	Frequency (MW)	
	531KHz	1710KHz
U.S.A., Canada	1.0 > 0.8	8.0 > 8.8

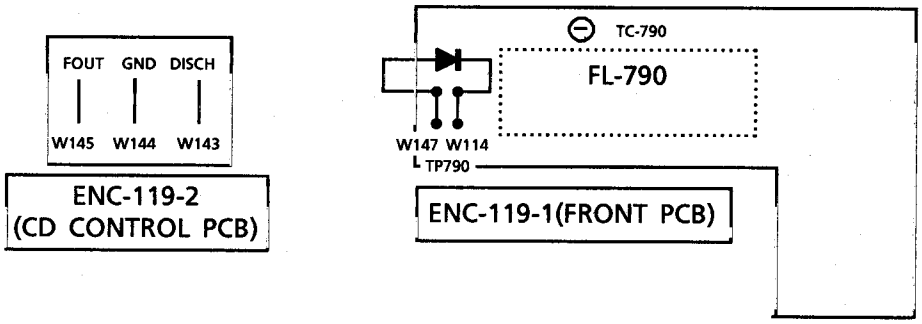


(2) FM center meter

Receive a broadcast by using the function of 'AUTO STOP'.
Adjust T105 (detector coil) so that the voltage at TP102 becomes 0±1.5mV.

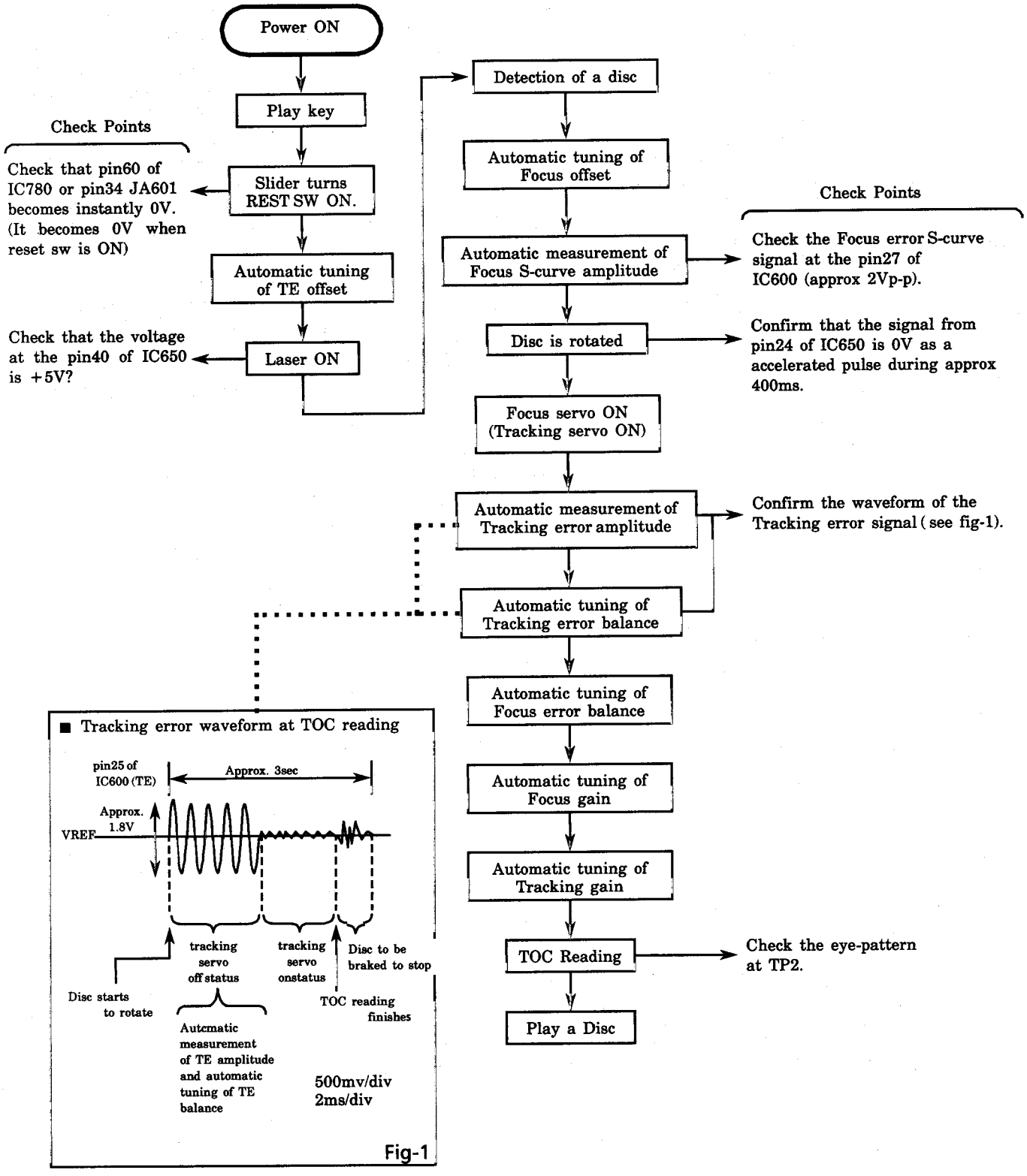
(3) Clock Adjustment

1. After putting a diode between W114 and W147 connect ac power cord into ac outlet.
2. Confirm that the display is off and remove the wire.
3. Connect a frequency counter to TP10 (W145).
4. Adjust TC791 so that the frequency becomes 50000.00±0.29Hz.



(NOTE) Adjustment is not necessary for CD section.

Flow of Functional Operation Until TOC is Read


Power ON
Play key
Slider turns REST SW ON.
Automatic tuning of TE offset
Laser ON
Check Points
Check that pin60 of IC780 or pin34 JA601 becomes instantly 0V. (It becomes 0V when reset sw is ON)
Check that the voltage at the pin40 of IC650 is +5V?
Detection of a disc
Automatic tuning of Focus offset
Automatic measurement of Focus S-curve amplitude
Check Points
Check the Focus error S-curve signal at the pin27 of IC600 (approx 2Vp-p).
Disc is rotated
Confirm that the signal from pin24 of IC650 is 0V as a accelerated pulse during approx 400ms.
Focus servo ON (Tracking servo ON)
Automatic measurement of Tracking error amplitude
Confirm the waveform of the Tracking error signal (see fig-1).
Automatic tuning of Tracking error balance
Automatic tuning of Focus error balance
Automatic tuning of Focus gain
Automatic tuning of Tracking gain
TOC Reading
Check the eye-pattern at TP2.
Play a Disc
■ Tracking error waveform at TOC reading
pin25 of IC600 (TE)
Approx. 3sec
Approx. 1.8V
VREF
tracking servo off status
tracking servo onstatus
Disc to be braked to stop
Disc starts to rotate
TOC reading finishes
Autcmatic measurement of TE amplitude and automatic tuning of TE balance
500mv/div
2ms/div
Fig-1

Maintenance of Laser Pickup

(1) Cleaning the pick up lens

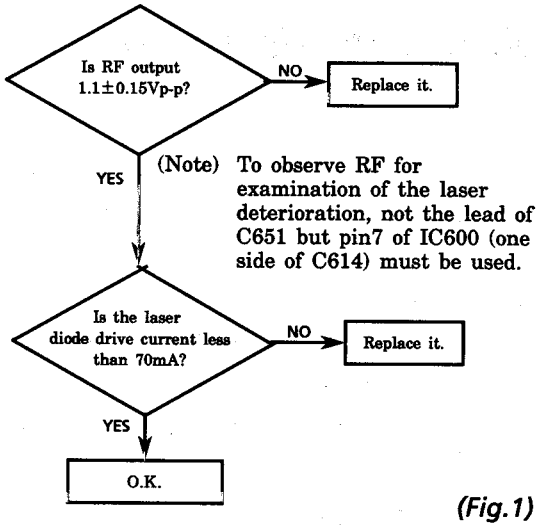
Befor you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.

(2) Life of the laser diode (Fig.1)

When the life of the laser diode has expired, the following symptoms will appear.

(1) The level of RF output (EFM output: ampli tude of eye pattern) will be low.

(2) The drive current required by the laser diode will be increased. In such a case, check the life of the laser diode following the flowchart below.

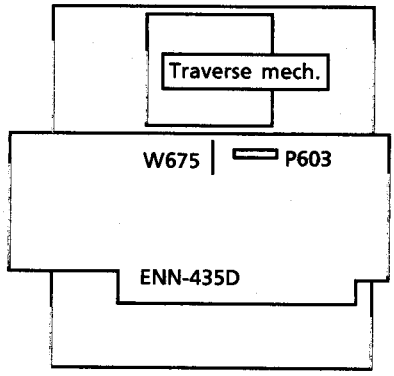

Is RF output 1.1±0.15Vp-p?
NO
Replace it.
YES
(Note) To observe RF for examination of the laser deterioration, not the lead of C651 but pin7 of IC600 (one side of C614) must be used.
Is the laser diode drive current less than 70mA?
NO
Replace it.
YES
O.K.

(Fig.1)

(3) Measurement of laser diode drive current (Fig.2)

Cut the jump wire (W675) and add a 1Ω resistor. (See the following Fig,2)

Measure the voltage across the resistor (1Ω) with a milli-voltmeter. When the voltage is more than 70mV, it shows that the life of the laser diode has expired.



(Fig.2)

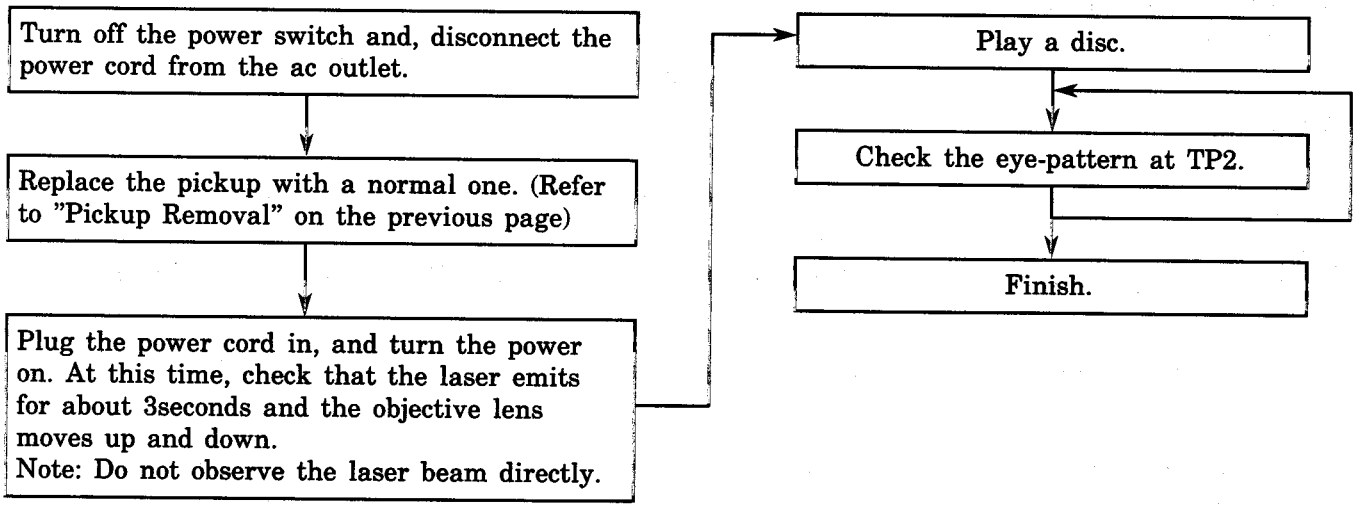
(4) Semi-fixed resistor on the APC PC board

The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.

If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.

If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

Replacement of Laser Pickup


Turn off the power switch and, disconnect the power cord from the ac outlet.
Replace the pickup with a normal one. (Refer to "Pickup Removal" on the previous page)
Plug the power cord in, and turn the power on. At this time, check that the laser emits for about 3seconds and the objective lens moves up and down.
Note: Do not observe the laser beam directly.
Play a disc.
Check the eye-pattern at TP2.
Finish.

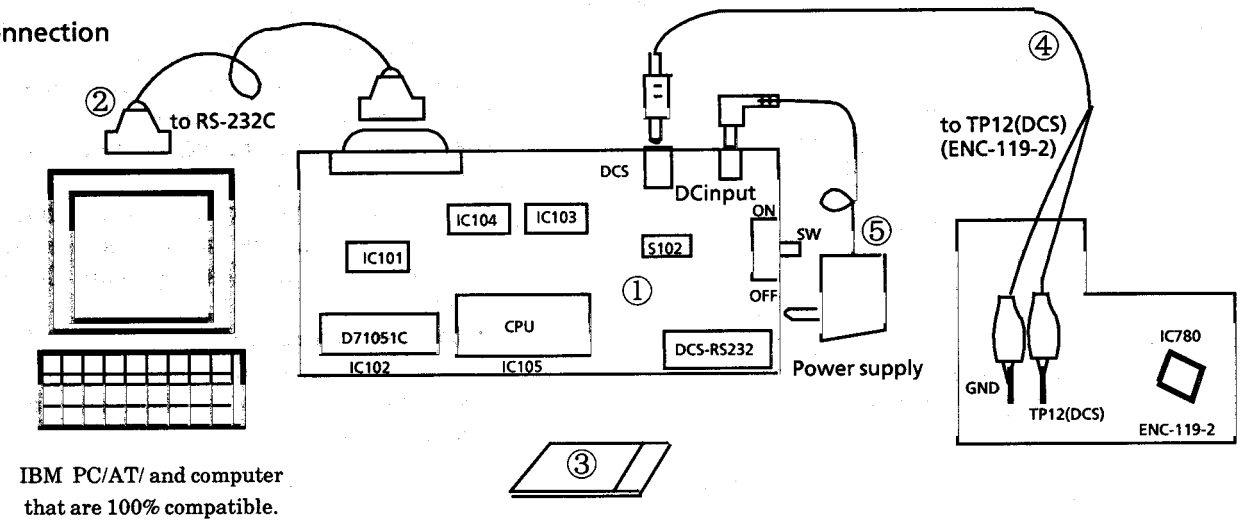
Self-diagnosis for pickup

From DCS output, this model reads automatically adjusted data for CD so that the pickup can be judged defective or not. Following shows its details.

1. Necessary items

① DCS → 232C Converting board(No.EBSJ1019)
② 232C cord (straight)
③ Floppy disc for self-diagnosis (No.EBSJ1021)
④ DCS cord
⑤ Power supply DC 6.3V (AA-SV11J--America/Canada) (AA-SV11Bs--the UK) (AA-SV11G--Germany) (AA-SV11EF--Continental Europe) (AA-SV11U--the Other aria)
⑥ CD (without scratches or damage)

2. Connection



For this diagnosis, a device driver for RS232C cord (straght type) is necessary.

(Ex.) C :¥DOS MODE COM 1 : 9600 , N , 8 , 1

adapter number(1or2) band rate parity data bit stop bit

3. Procedure

① Turn the converting board's switch on after connecting between CA-C770 and the above neccesary items
Set S102(switching DCS positive from/to negative logic) so that LED can emit GREEN(positive logic).

② Put a disc on the + 1 tray and press the play button.
Do not

③ Input "AUTO 01" on personal computer's keyboard and the CD's automatic adjustment value and judgment for the pickup are displayed on the screen.

4. Judgment

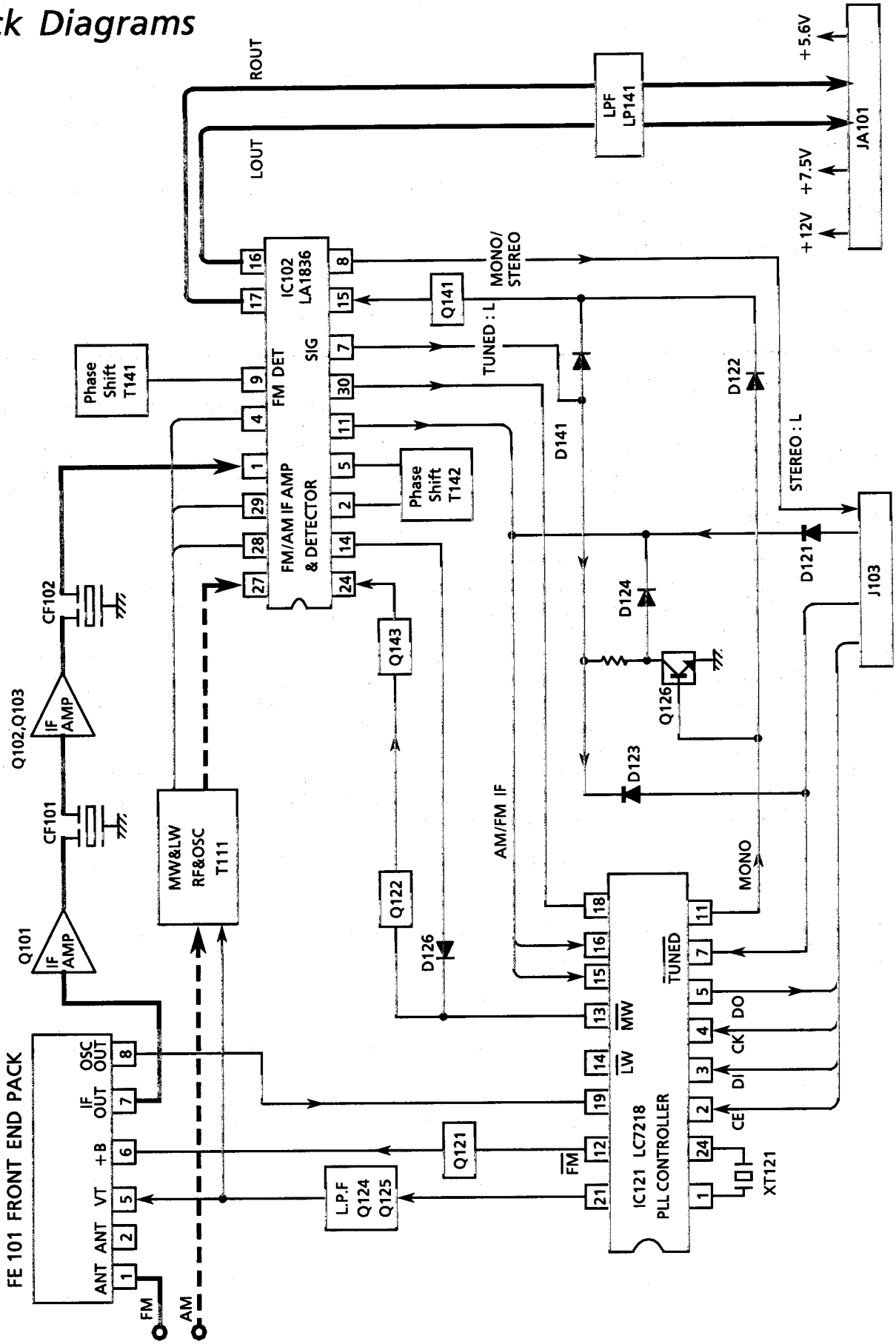
To judge whether pickup is defective or not, firstly process of automatic adjustment is checked by automatic adjustment flag. And, the value(automatic adjustment value for focus gain) displayed on the screen is used for its final judgment.

It is supposed that the pickup is defective or the signal path is faulty if the Flag1 or Flag0 indicates not "F" but a figure.
(See the following example.)

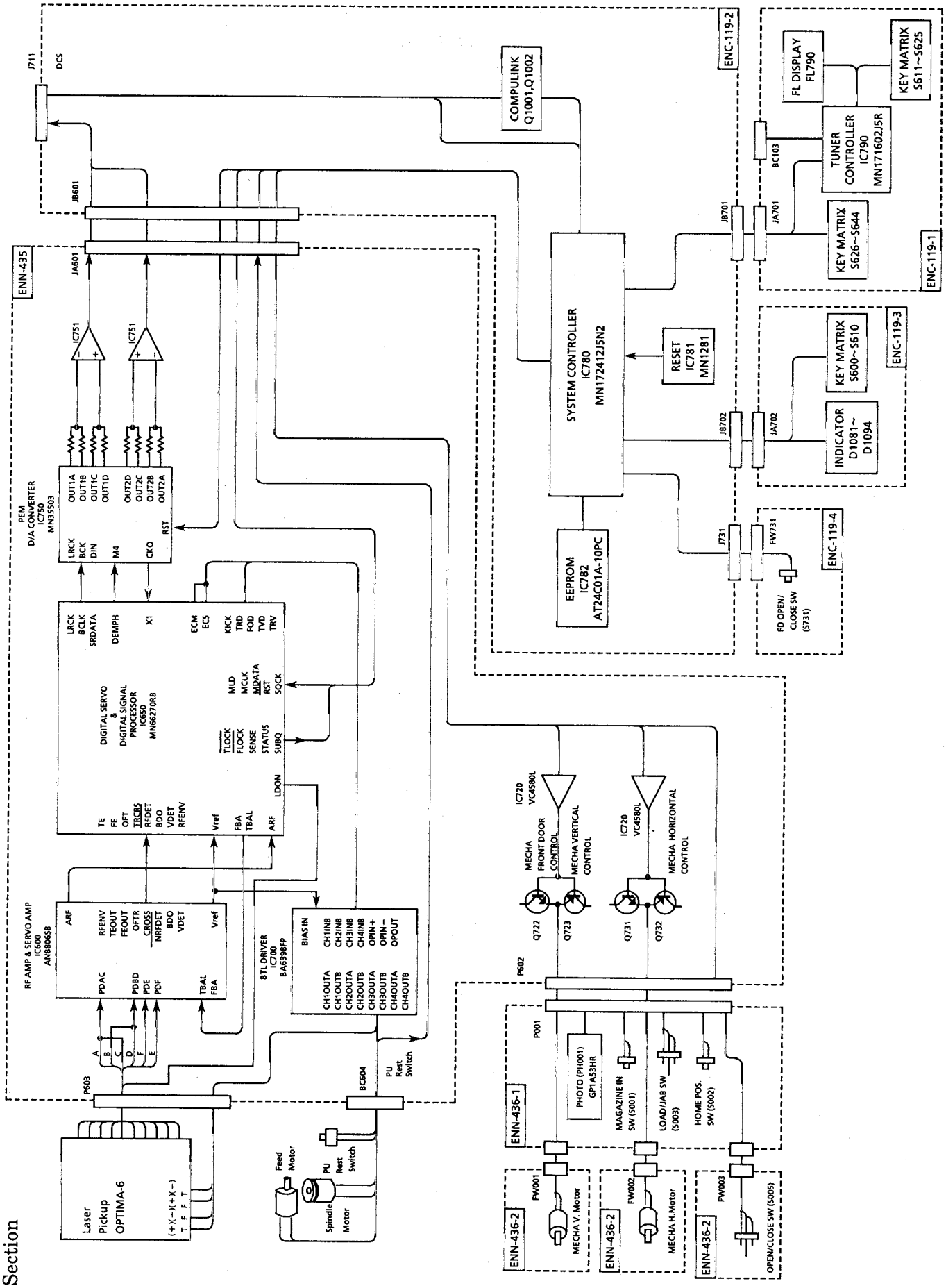
Flag1	Flag0	Details	Supposed cause
0	0	Automatic adjustment for tracking offset is failed.	The automatic adjustment is not completed. (Trouble in circuit.)
0	1	Automatic adjustment for focus offset is failed. (Disc does not rotate.)	The lens does not move. (Power supply is not turned on. Wire is cut.)
0	3	Automatic rough adjustment for focus gain is failed.	
0	7	Automatic rough adjustment for tracking gain is failed. (The focus and tracking gain are not locked though the disc rotates.)	Laser deterioration (low RF signal output). Offset beam.
0	F	Disc rotates, focus and tracking gain are locked and automatic rough adjustment for tracking gain is also completed though automatic adjustment for tracking balance is failed.	Laser deterioration (low RF signal output). Offset beam.
1	F	Automatic adjustment for focus balance is failed. (TOC is not read tough the disc rotates.)	RF signal output is low. Tracking loop is not turned on. RF jitter is too much.
3	F	Automatic rough adjustment for focus gain is failed.	
7	F	Automatic rough adjustment for tracking gain is failed.	
F	F	All automatic adjustments are completed.	

The pickup is judged defective though the Flag0 and Flag1 indicate "F" and those adjustments are completed if the adjustment value exceeds 19dB.

Block Diagrams



■ CD Section


J711
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JB601
ENN-435
JA601
IC751
IC751
PEM
D/A CONVERTER
IC750
MN35503
OUT1A
OUT1B
OUT1C
OUT1D
OUT2D
OUT2C
OUT2B
OUT2A
LRCK
BCK
DIN
M4
CKO
RST
DIGITAL SERVO & DIGITAL SIGNAL PROCESSOR
IC650
MN66270RB
LRCK
BCLK
SRDATA
DEMPH
XI
ECM
ECS
KICK
TRD
FOD
TVD
TRV
MLD
MCLK
MDATA
RST
SQCK
TLOCK
FLOCK
SENSE
STATUS
SUBQ
LDON
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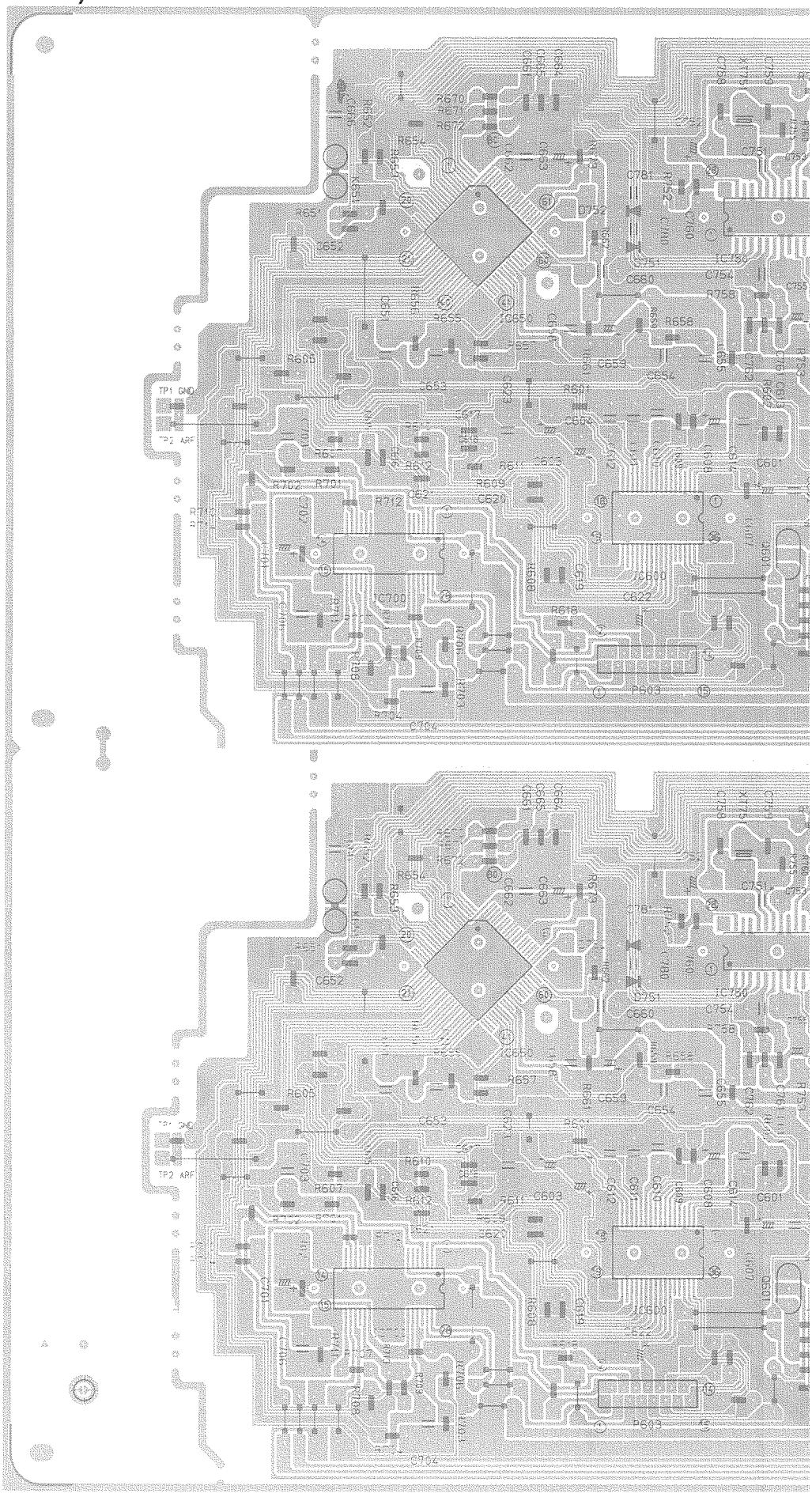
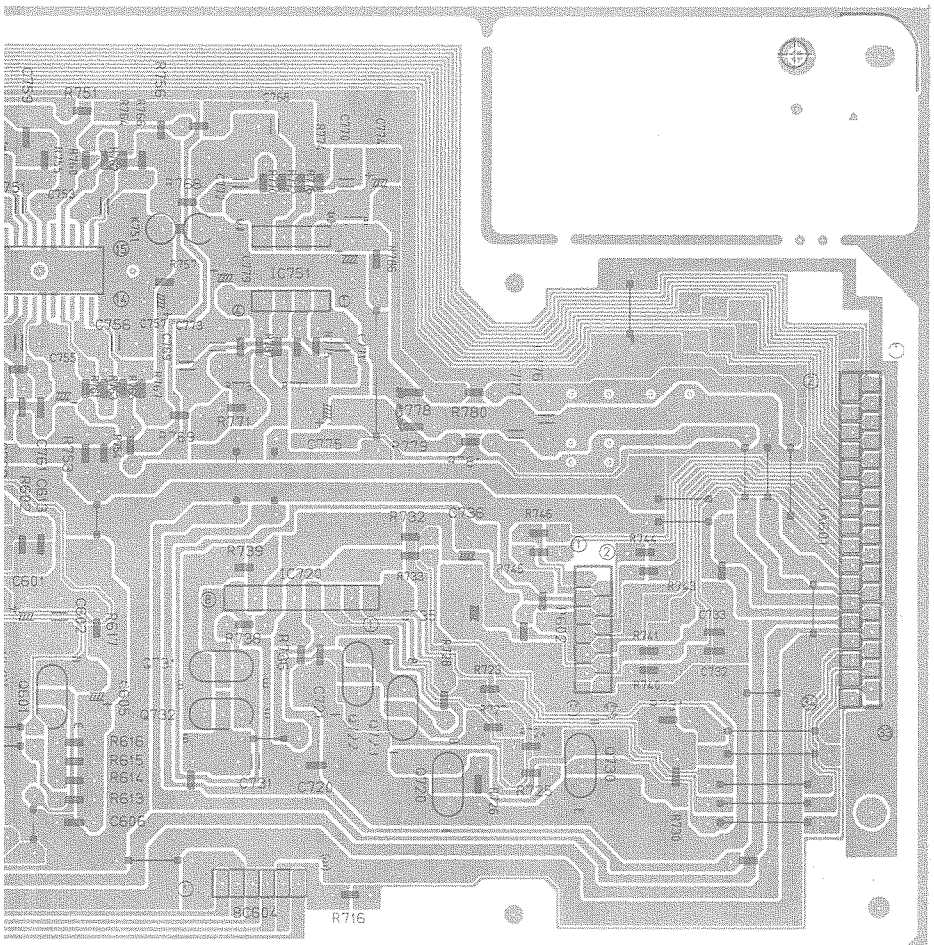
OFT
TRCBS
RFDET
BDO
VDET
RFENV
Vref
FBA
TBAL
ARF
RF AMP & SERVO AMP
IC600
AN8806SB
ARF
RFENV
TEOUT
FEOUT
OFTR
CROSS
NRFDET
BDO
VDET
Vref
PDAC
PDBD
PDE
PDF
TBAL
FBA
A
B
C
D
F
E
P603
BTL DRIVER
IC700
BA6398FP
BIAS IN
CH1INB
CH2INB
CH3INB
CH4INB
OPIN+
OPIN−
OPOUT
CH1OUTA
CH1OUTB
CH2OUTA
CH2OUTB
CH3OUTA
CH3OUTB
CH4OUTA
CH4OUTB
BC604
PU Rest Switch
Laser Pickup OPTIMA-6
(+X−)(+X−)
T F F T
Feed Motor
PU Rest Switch
Spindle Motor
IC720
VC4580L
MECHA FRONT DOOR CONTROL
MECHA VERTICAL CONTROL
IC720
VC4580L
MECHA HORIZONTAL CONTROL
Q722
Q723
Q731
Q732
P602
P001
ENN-436-1
PHOTO (PH001)
GP1A53HR
MAGAZINE IN SW (S001)
LOAD/JAB SW (S003)
HOME POS. SW (S002)
ENN-436-2
FW001
MECHA V.Motor
ENN-436-2
FW002
MECHA H.Motor
ENN-436-2
FW003
OPEN/CLOSE SW (S005)
COMPULINK
Q1001,Q1002
SYSTEM CONTROLLER
IC780
MN172412J5N2
RESET
IC781
MN1281
EEPROM
IC782
AT24C01A-10PC
ENC-119-2
ENC-119-1
ENC-119-3
ENC-119-4
JB701
JA701
BC103
JB702
JA702
J731
FW731
FD OPEN/ CLOSE SW (S731)
FL DISPLAY
FL790
KEY MATRIX
S611~S625
TUNER CONTROLLER
IC790
MN171602J5R
KEY MATRIX
S626~S644
KEY MATRIX
S600~S610
INDICATOR
D1081~
D1094

-MEMO-

Printed Circuit Board

CD P.C.Board (ENN-435)




IC751
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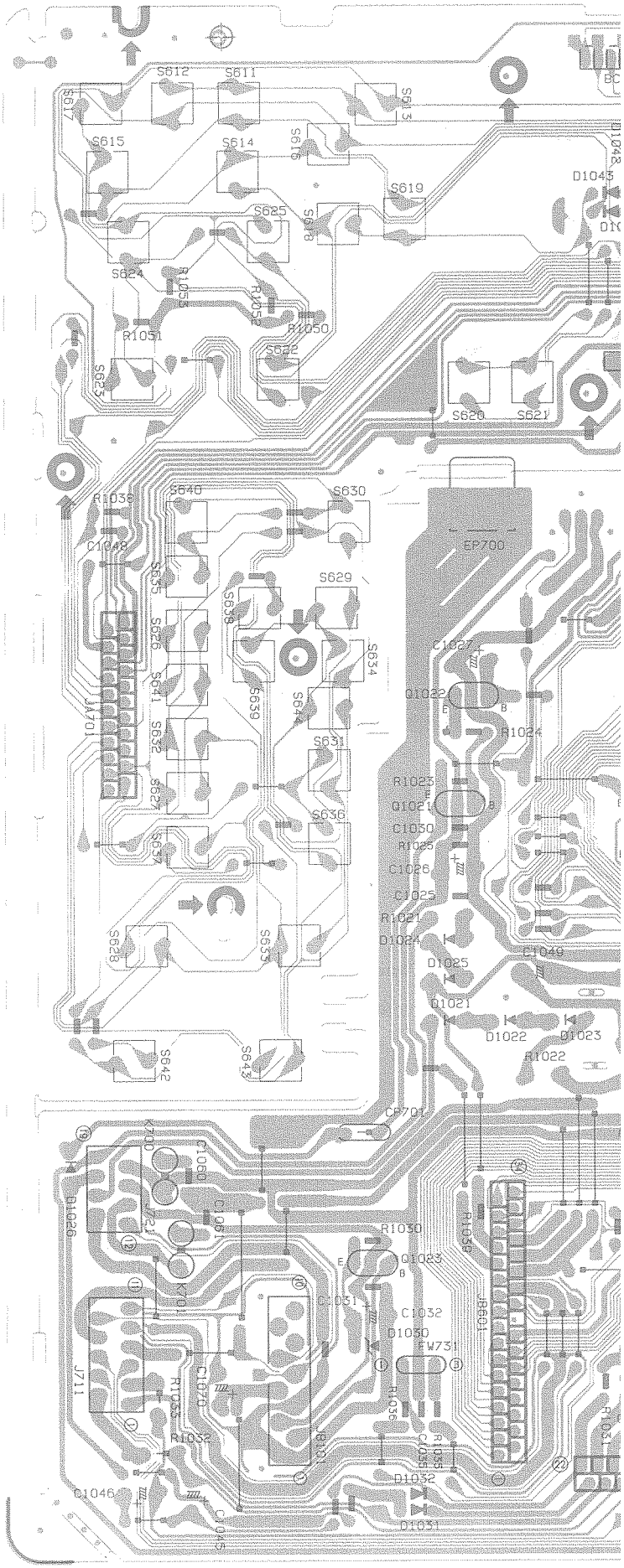
R9997
R9998
R9999
R10000

Disply&Key Matrix P.C.Board (ENC-119)



C1040
X790
TC790
BC103
D1040
IC790
D1041
D1042
D1043
D1044
C1043
C1041
C1042
C1050
R1060
FL790
C1051
C1052
RA790
RA792
RA791
RA780
C780
IC780
Q1001
R1003
C1000
C1001
Q1002
R1037
IC782
C1037
C1039
D1001
R1001
C1002
R1010
Q1010
Q1011
R1011
Q1012
R1012
Q1013
R1013
Q1014
R1014
Q1015
R1015
Q1016
R1016
IC781
RA782
C1003
C1002
R1002
RA781
C1033
TP13
DCS
GND
TP11
DISCHARGE
GND
VDD
TP10
C1056
R1021
JB701
JB702
D1093
D1091
D1089
D1087
D1085
D1083
D1081
D1094
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S602
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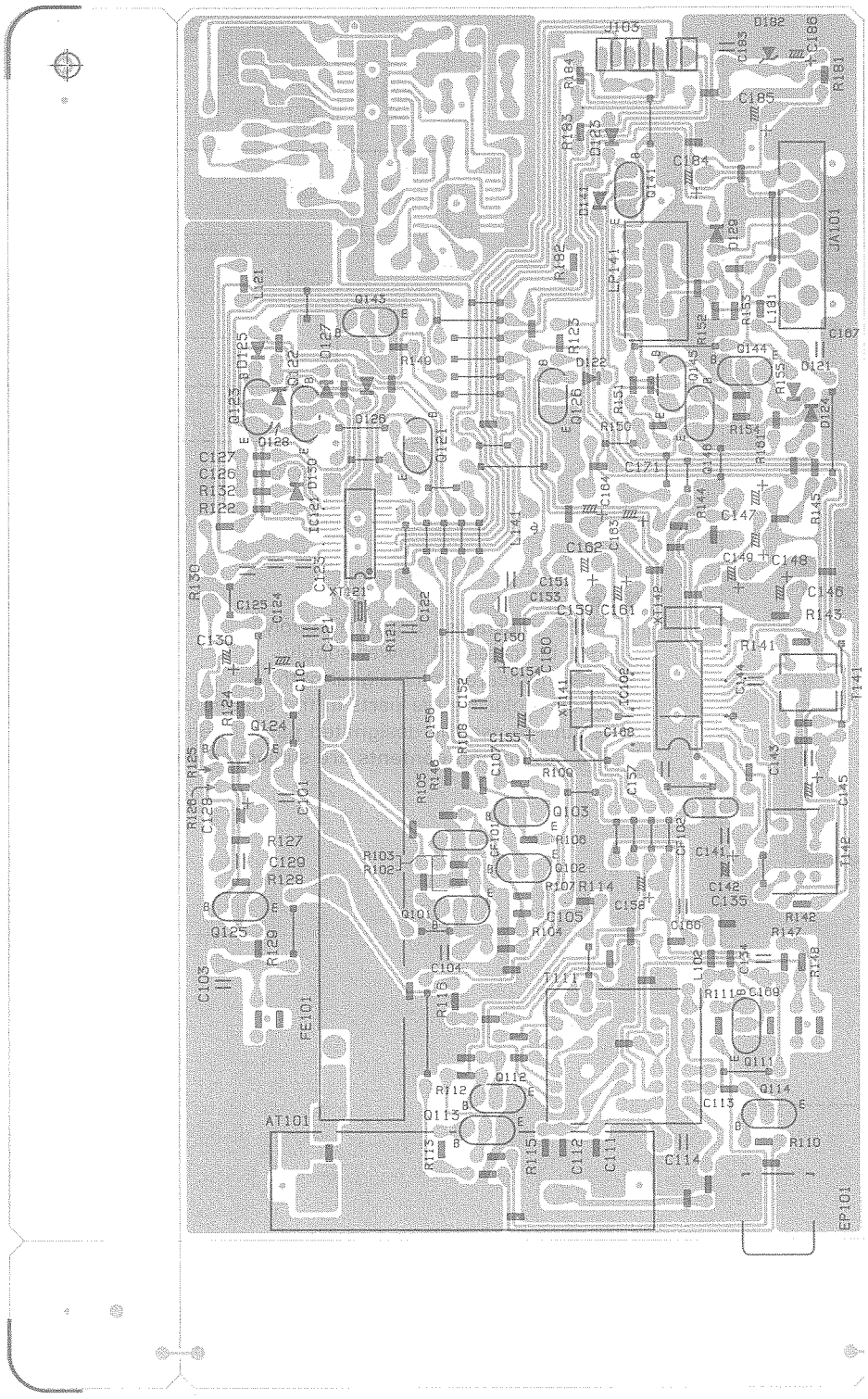
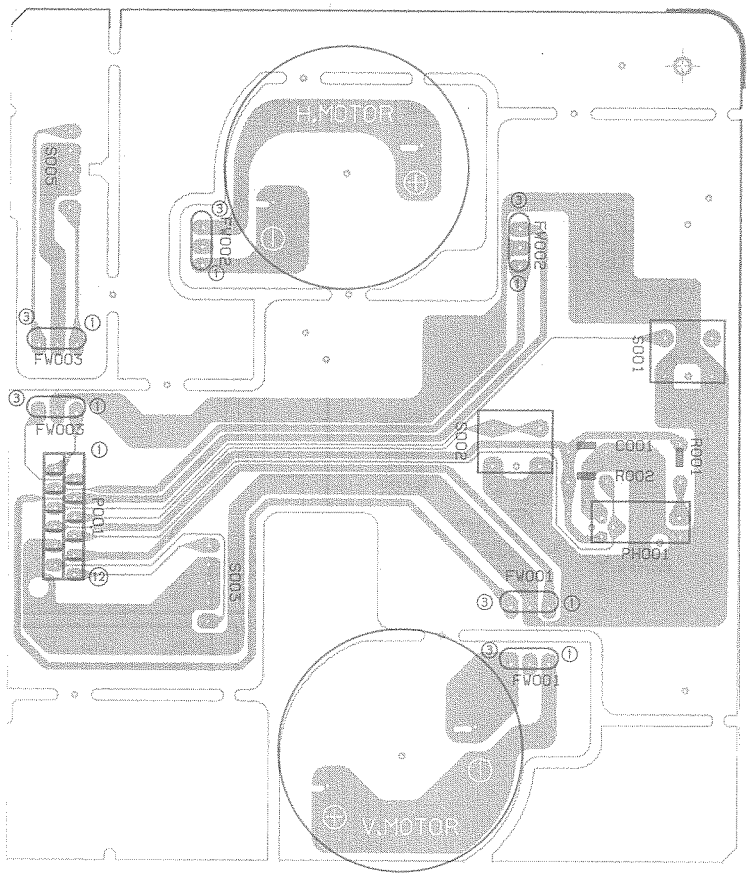
S603
S606
JA702
J731
S731

Tuner P.C.Board (ENA-161)

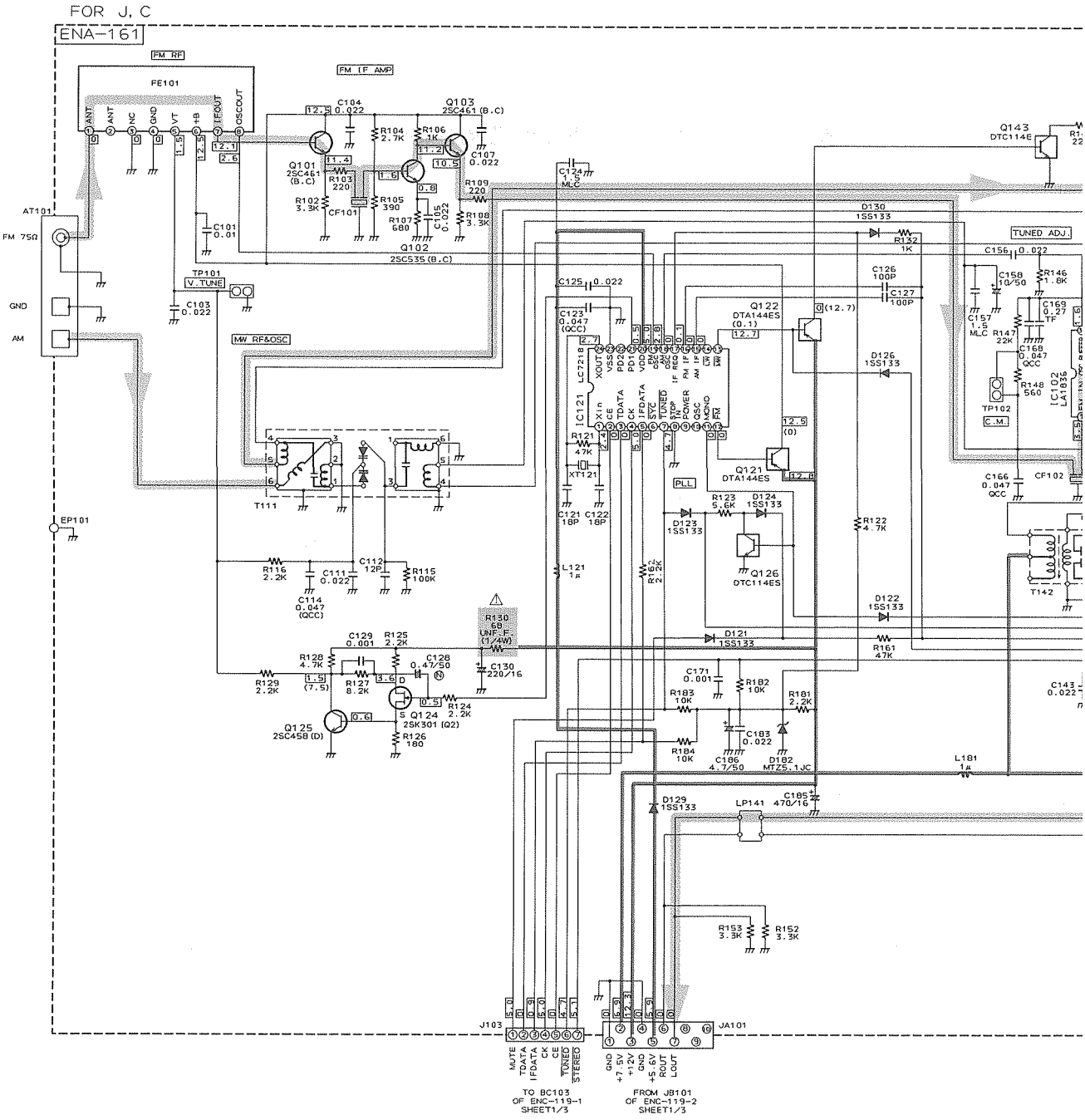


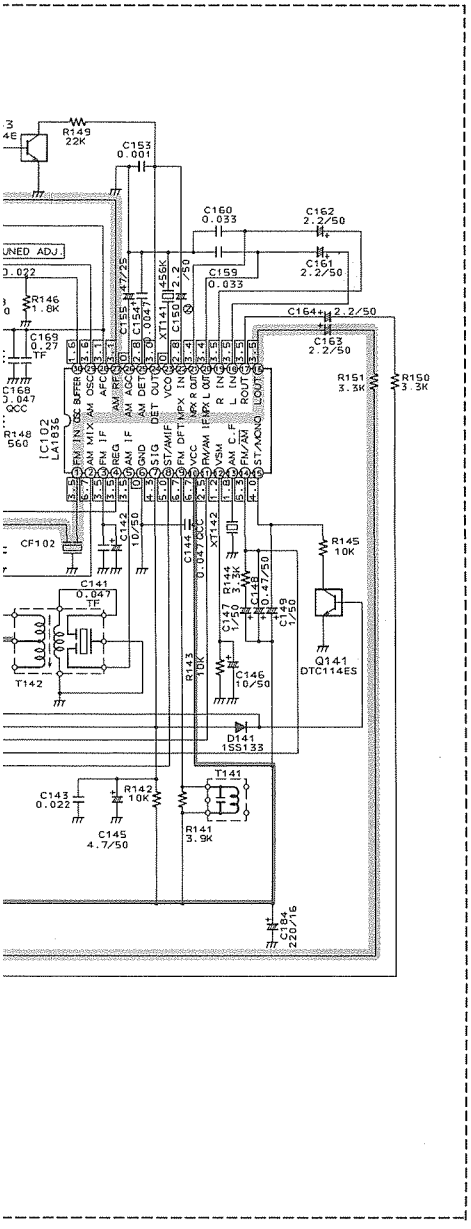
■ CD Changer P.C.Board (ENN-436)



Schematic Diagram

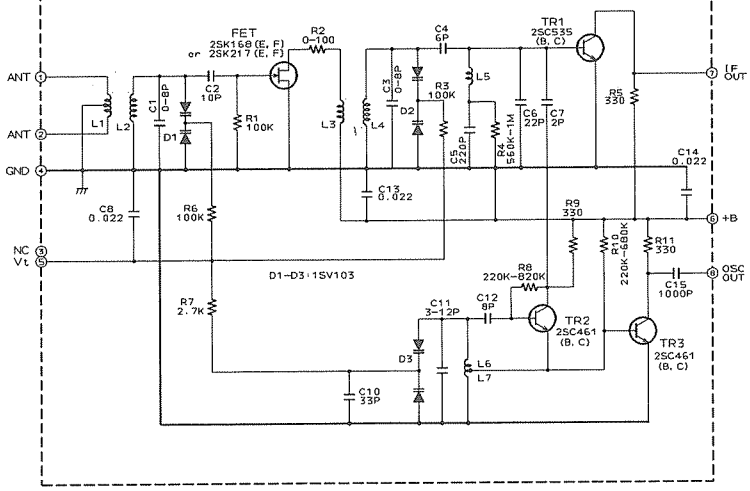
(1) Tuner Section





FM AUTO NO SIGNAL
( )MW NO SIGNAL
[ ]LW NO SIGNAL

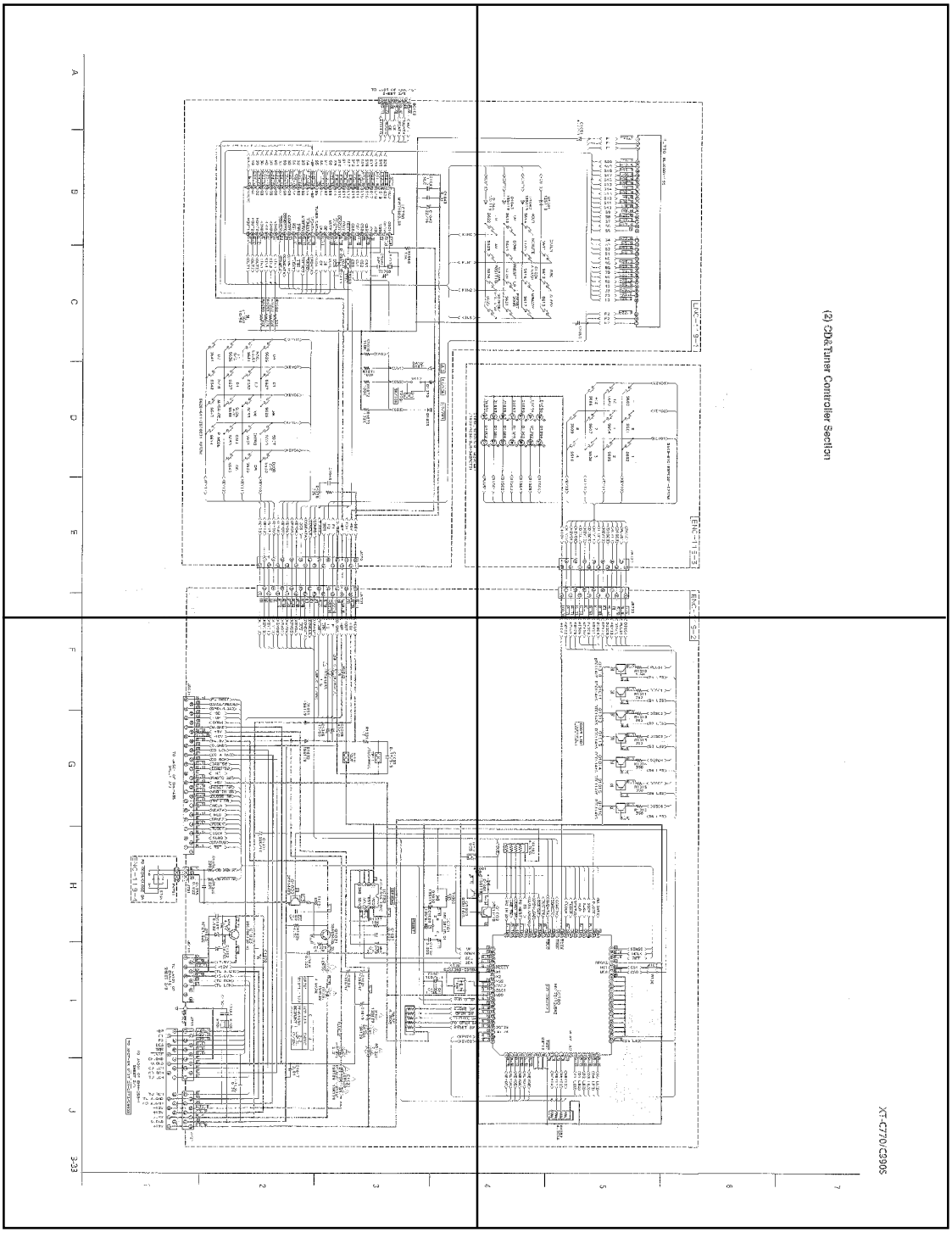
FE101
EAF2203-004



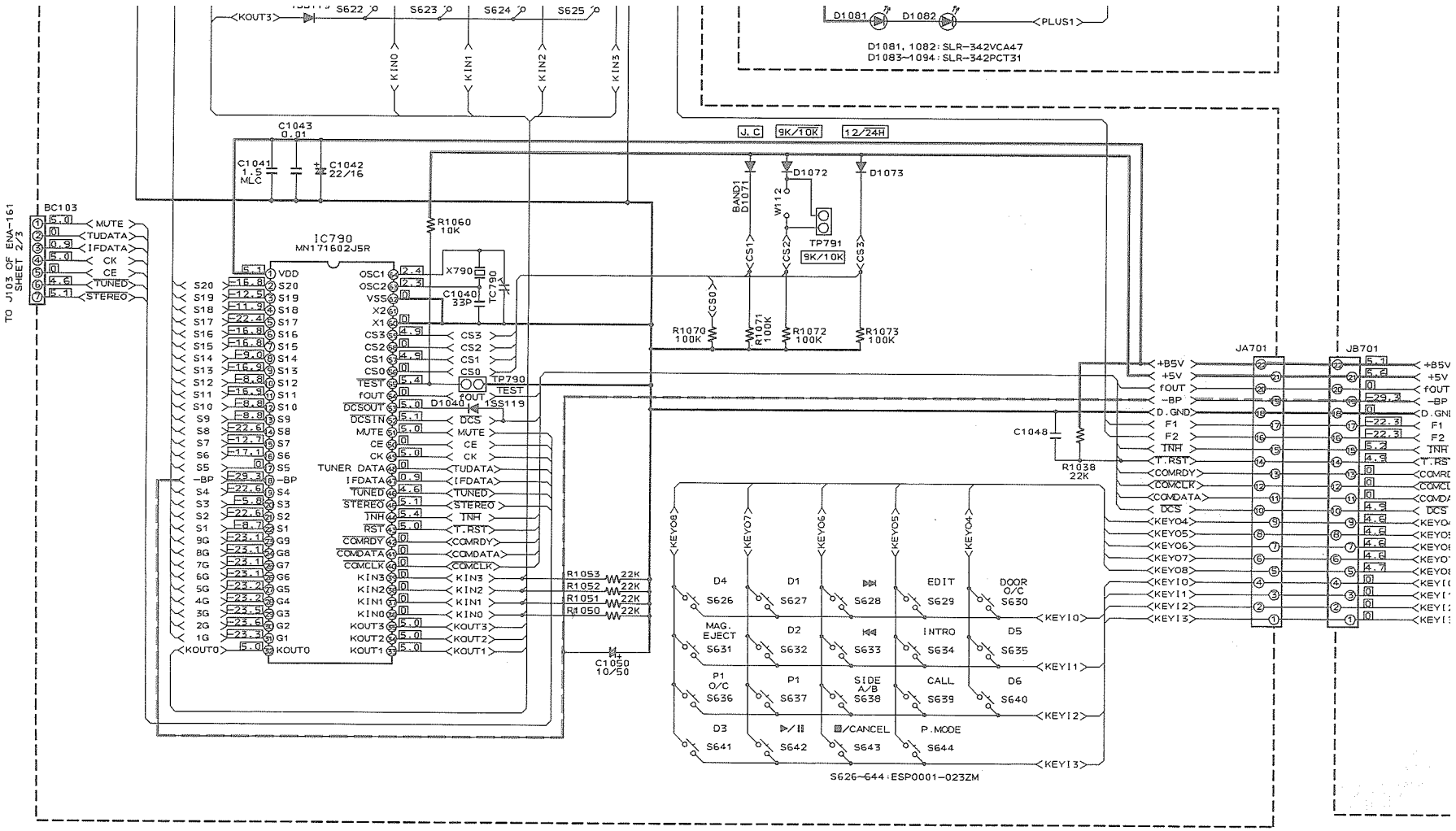
Notes:

1. ——— indicates + B power supply.
2. - - - - - indicates − B power supply.
3. ▒▒▒ indicates main signal path.
4. When replacing the parts in the shaded are (▒▒▒) and those marked with ⚠, be sure to use the designated parts to ensure safety.
5. The design and contents are subject to change without notice.

P3-33-a P3-33-b



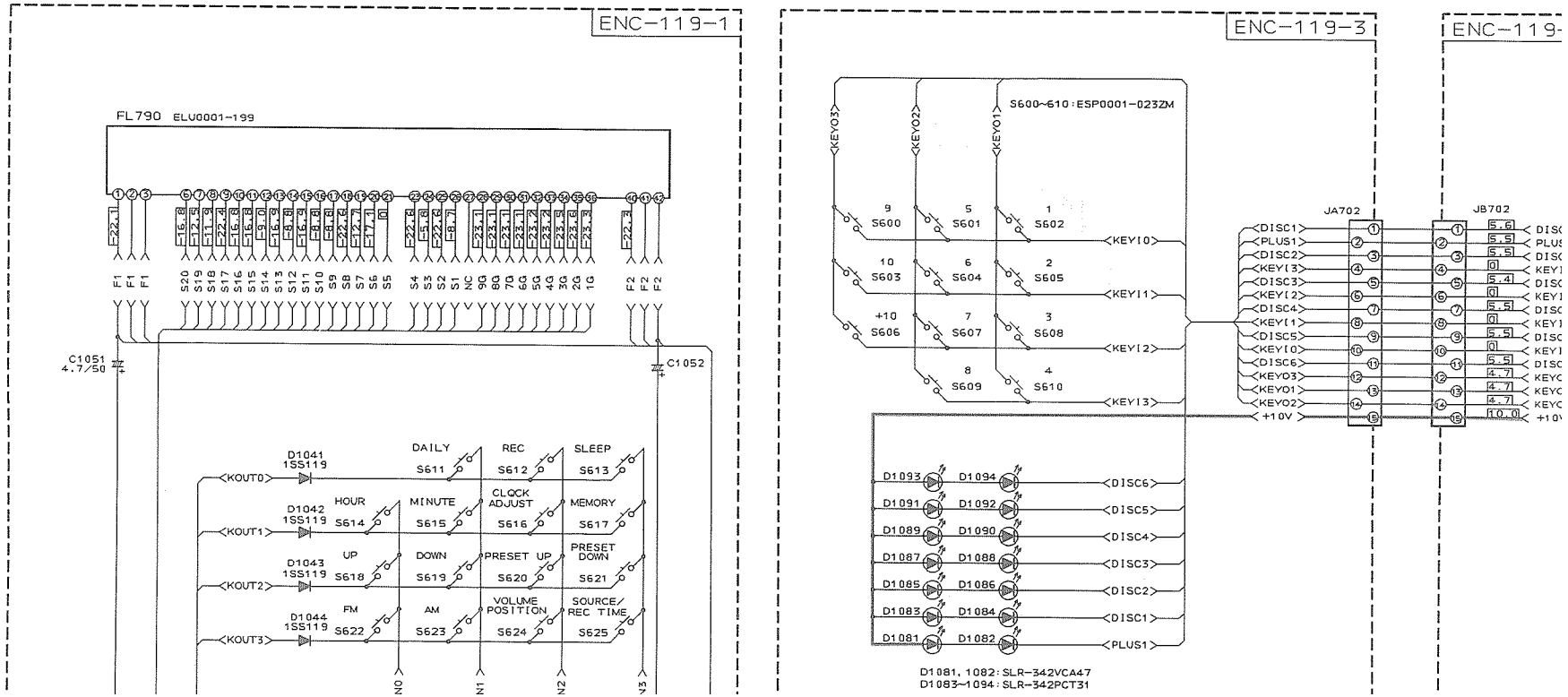
P3-33-c P3-33-d

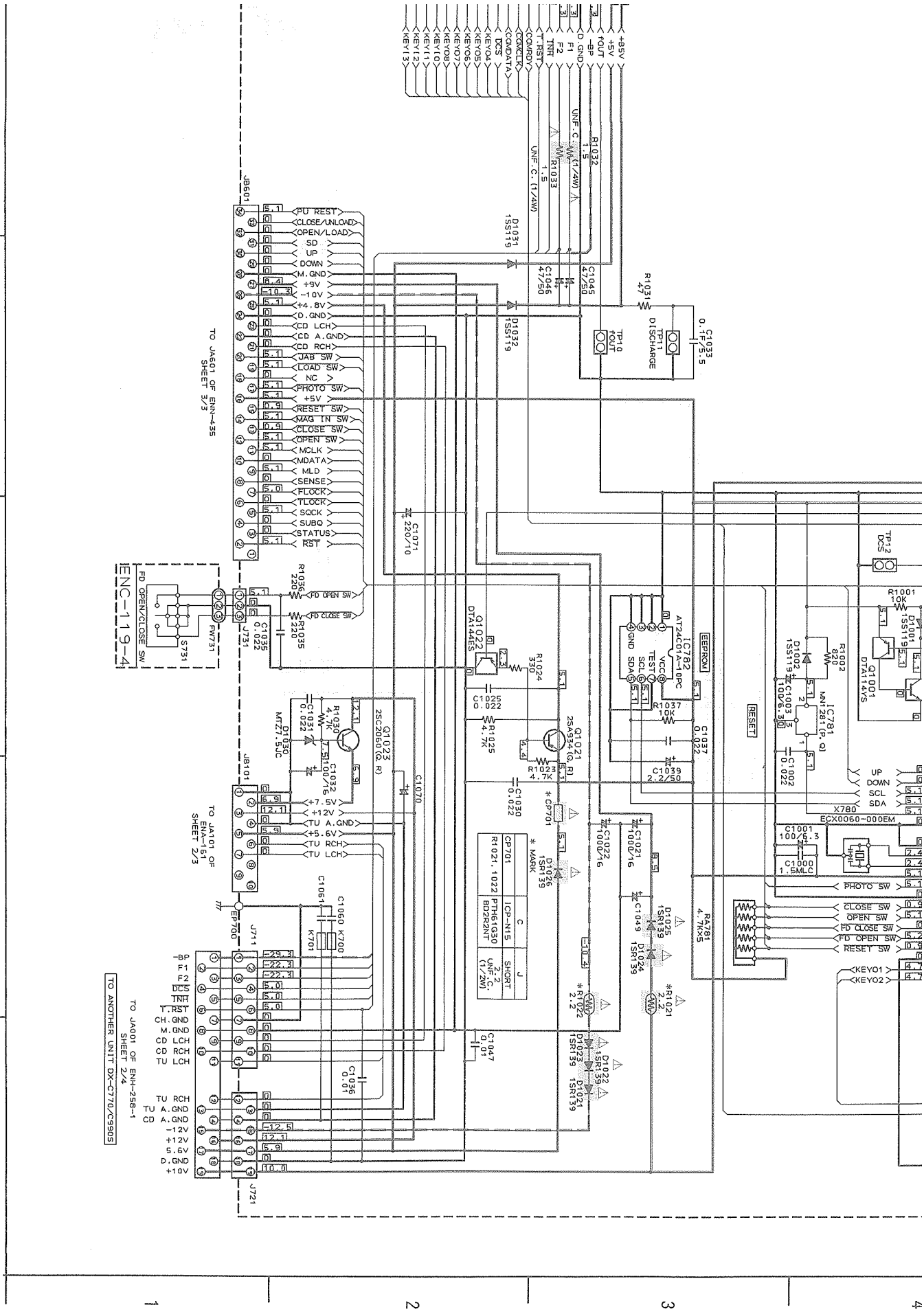

KOUT3
S622
S623
S624
S625
KIN0
KIN1
KIN2
KIN3
D1081
D1082
PLUS1
D1081, 1082: SLR-342VCA47
D1083~1094: SLR-342PCT31
C1043
0.01
C1041
1.5
MLC
C1042
22/16
J. C
9K/10K
12/24H
D1071
D1072
D1073
W112
TP791
9K/10K
R1060
10K
IC790
MN171602J5R
X790
C1040
33P
TC790
R1070
100K
R1071
100K
R1072
100K
R1073
100K
CS0
CS1
CS2
CS3
TP790
TEST
D1040
1SS119
fOUT
DCS
MUTE
CE
CK
TUNER DATA
IFDATA
TUNED
STEREO
INH
RST
COMRDY
COMDATA
COMCLK
KOUT0
KOUT1
KOUT2
KOUT3
R1053
R1052
R1051
R1050
22K
C1050
10/50
C1048
R1038
22K
BC103
MUTE
TUDATA
IFDATA
CK
CE
TUNED
STEREO
TO J103 OF ENA-161 SHEET 2/3
JA701
JB701
+B5V
+5V
fOUT
-BP
D.GND
F1
F2
INH
T.RST
COMRDY
COMCLK
COMDATA
DCS
KEYO4
KEYO5
KEYO6
KEYO7
KEYO8
KEYI0
KEYI1
KEYI2
KEYI3
D4
S626
D1
S627
S628
EDIT
S629
DOOR O/C
S630
MAG. EJECT
S631
D2
S632
S633
INTRO
S634
D5
S635
P1 O/C
S636
P1
S637
SIDE A/B
S638
CALL
S639
D6
S640
D3
S641
▶/II
S642
■/CANCEL
S643
P.MODE
S644
S626~644: ESP0001-023ZM

A B C D E

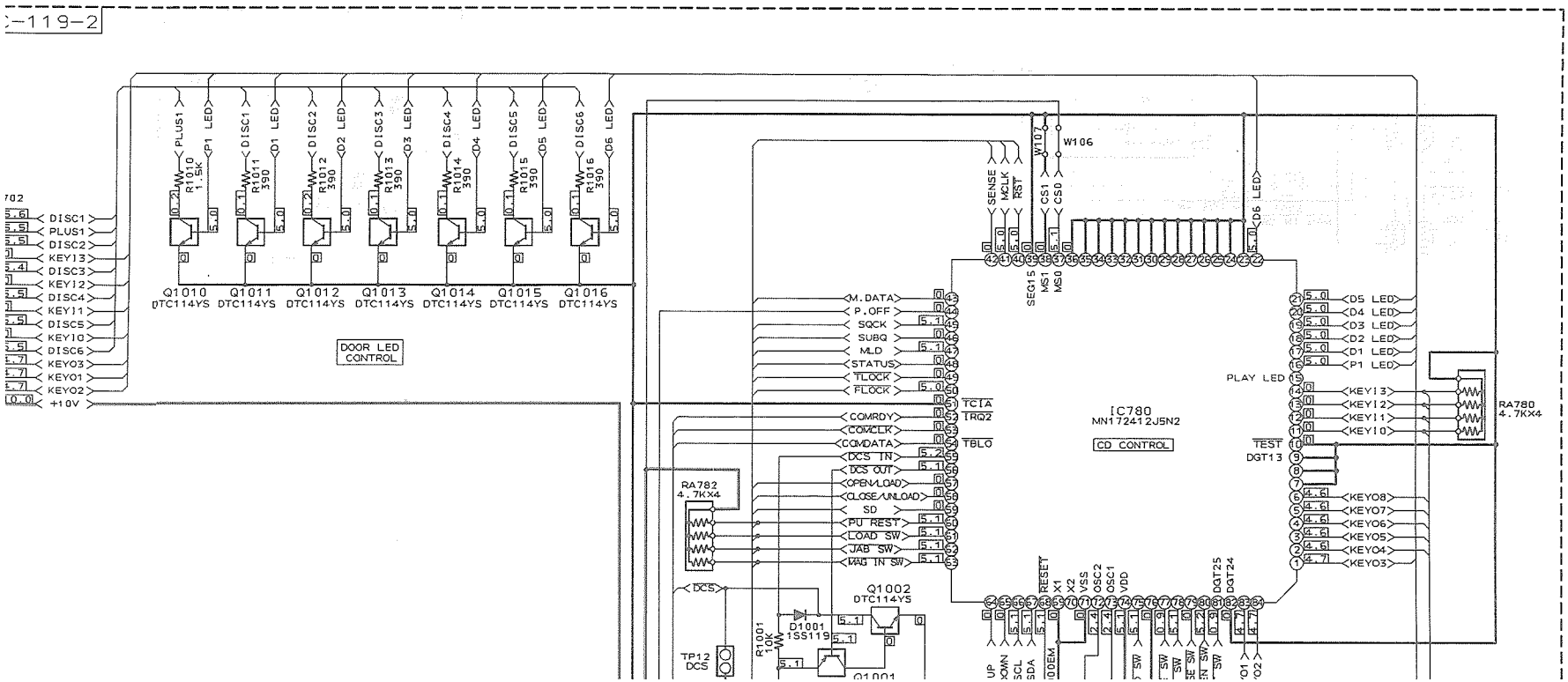
P3-33-a

(2) CD&Tuner Controller Section

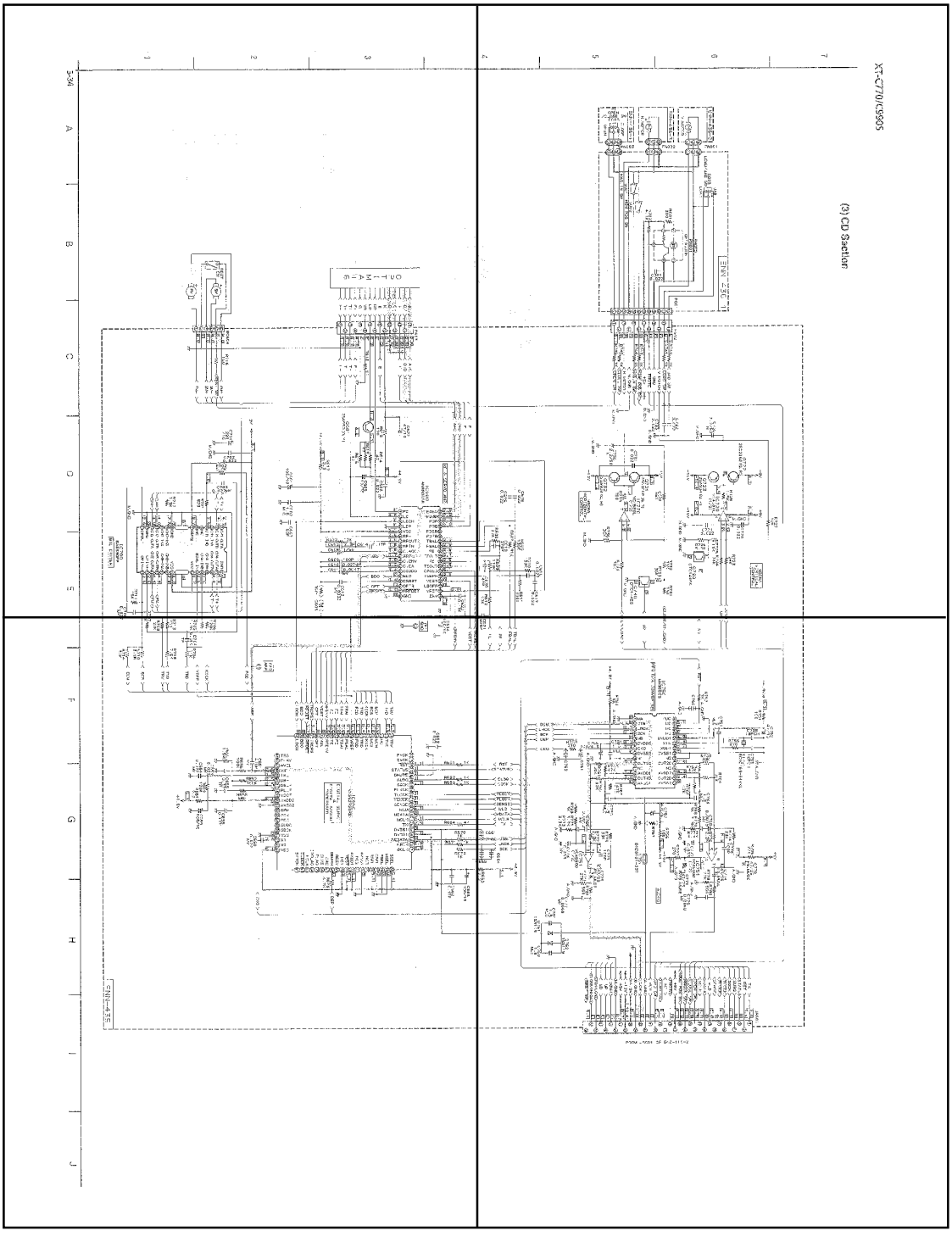




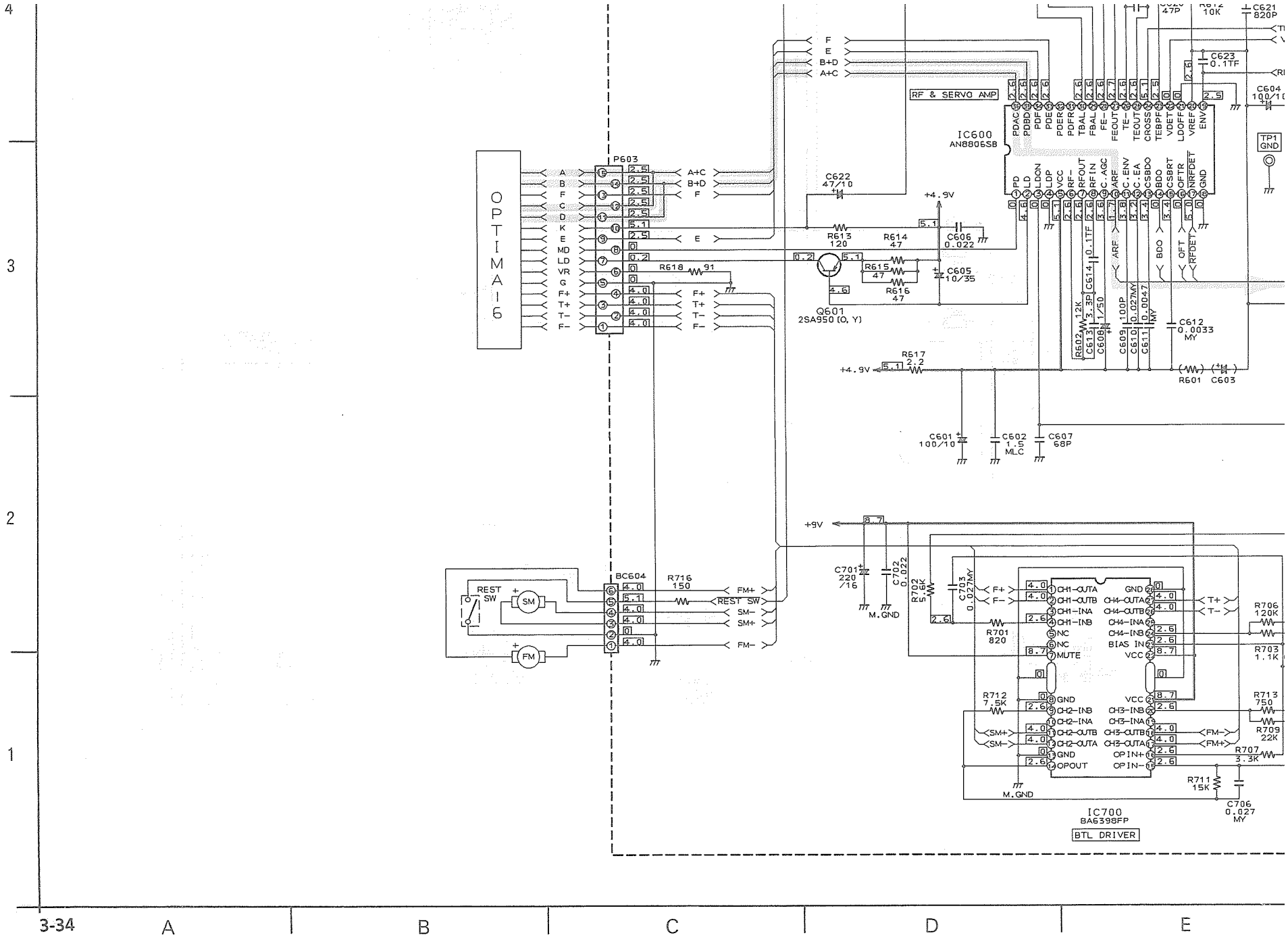
P3-33-c


C-119-2
DOOR LED CONTROL
Q1010 DTC114YS
Q1011 DTC114YS
Q1012 DTC114YS
Q1013 DTC114YS
Q1014 DTC114YS
Q1015 DTC114YS
Q1016 DTC114YS
PLUS1
P1 LED
DISC1
D1 LED
DISC2
D2 LED
DISC3
D3 LED
DISC4
D4 LED
DISC5
D5 LED
DISC6
D6 LED
R1010 1.5K
R1011 390
R1012 390
R1013 390
R1014 390
R1015 390
R1016 390
KEY13
KEY12
KEY11
KEY10
KEYO3
KEYO1
KEYO2
+10V
W106
W107
SENSE
MCLK
RST
CS1
CS0
SEG15
MS1
MS0
M.DATA
P.OFF
SQCK
SUBQ
MLD
STATUS
TLOCK
FLOCK
TCTA
TRQ2
TBLO
COMRDY
COMCLK
COMDATA
DCS IN
DCS OUT
OPEN/LOAD
CLOSE/UNLOAD
SD
PU REST
LOAD SW
JAB SW
MAG IN SW
IC780
MN172412J5N2
CD CONTROL
PLAY LED
TEST
DGT13
KEYO8
KEYO7
KEYO6
KEYO5
KEYO4
KEYO3
RA780 4.7KX4
RA782 4.7KX4
Q1002 DTC114YS
D1001 1SS119
R1001 10K
TP12 DCS
RESET
X1
X2
VSS
OSC2
OSC1
VDD
DGT25
DGT24

P3-34-a P3-34-b



P3-34-c P3-34-d


OPTIMA16
P603
RF & SERVO AMP
IC600
AN8806SB
Q601
2SA950 (O, Y)
BC604
REST SW
SM
FM
IC700
BA6398FP
BTL DRIVER
M.GND
TP1
GND
R601
C603
C604
C605
C606
C607
C608
C609
C610
C611
C612
C613
C614
C621
C622
C623
R602
R603
R604
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R614
R615
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R618
R701
R702
R703
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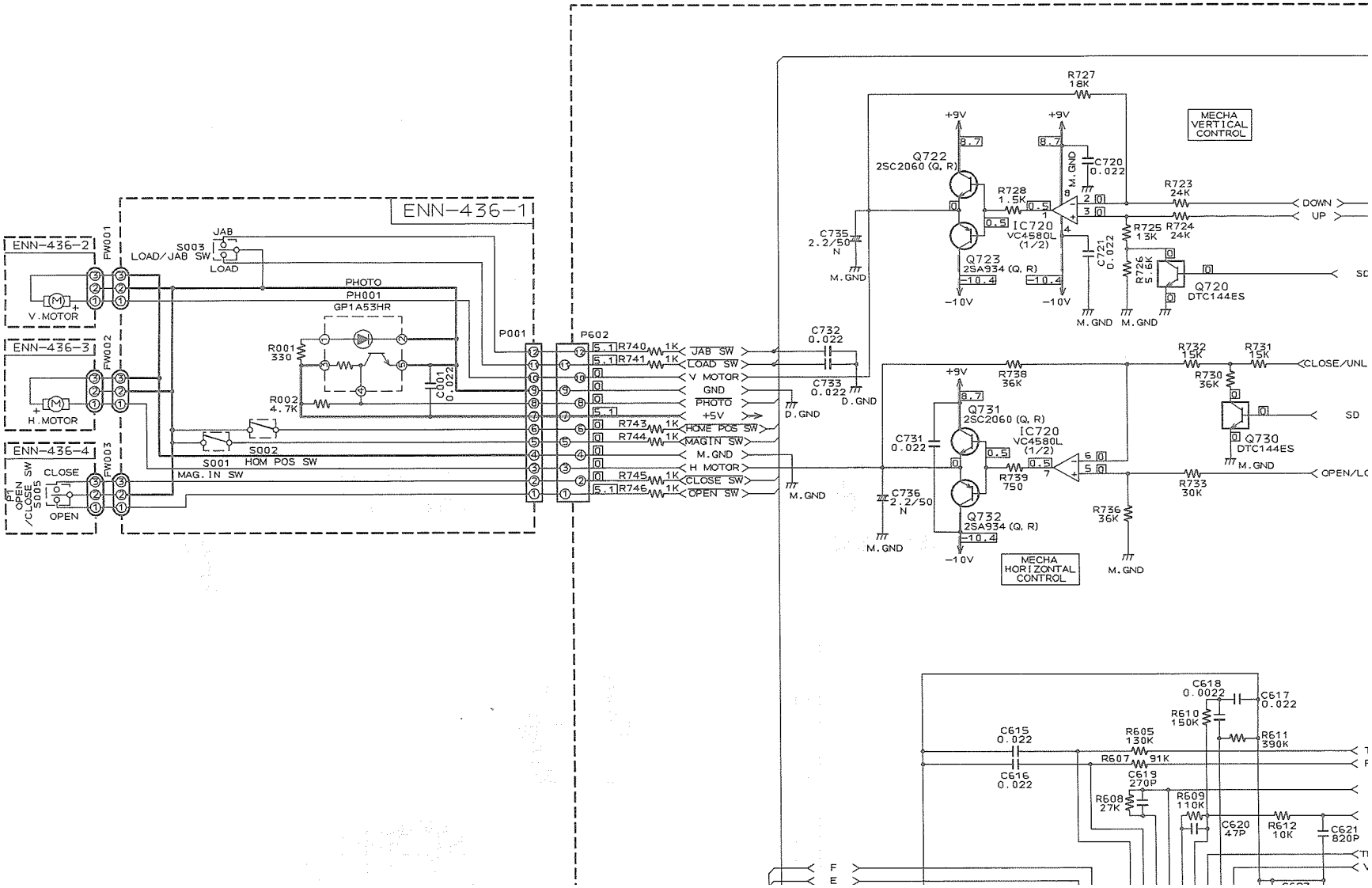
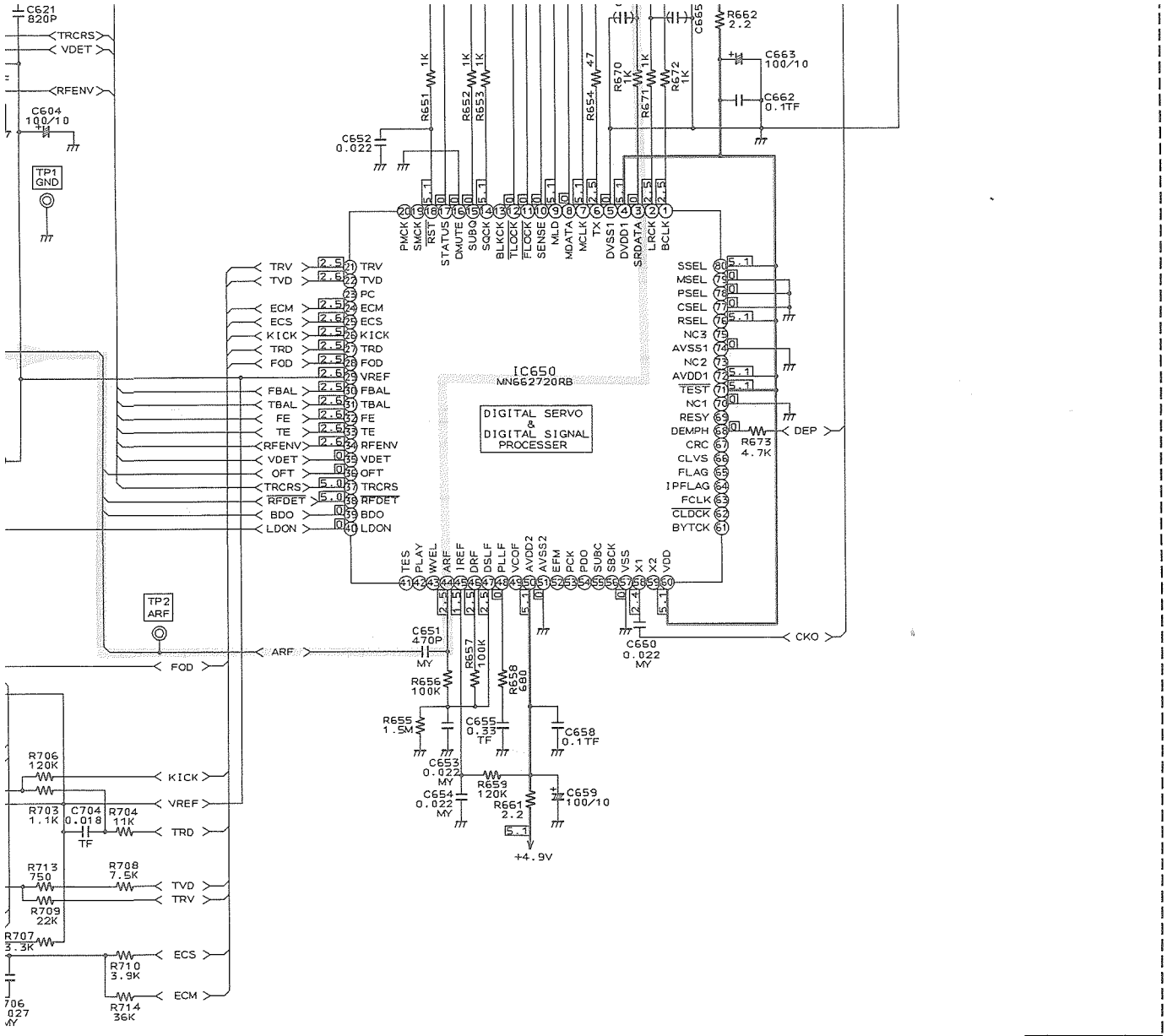
R707
R709
R711
R712
R713
R716
C701
C702
C703
C706

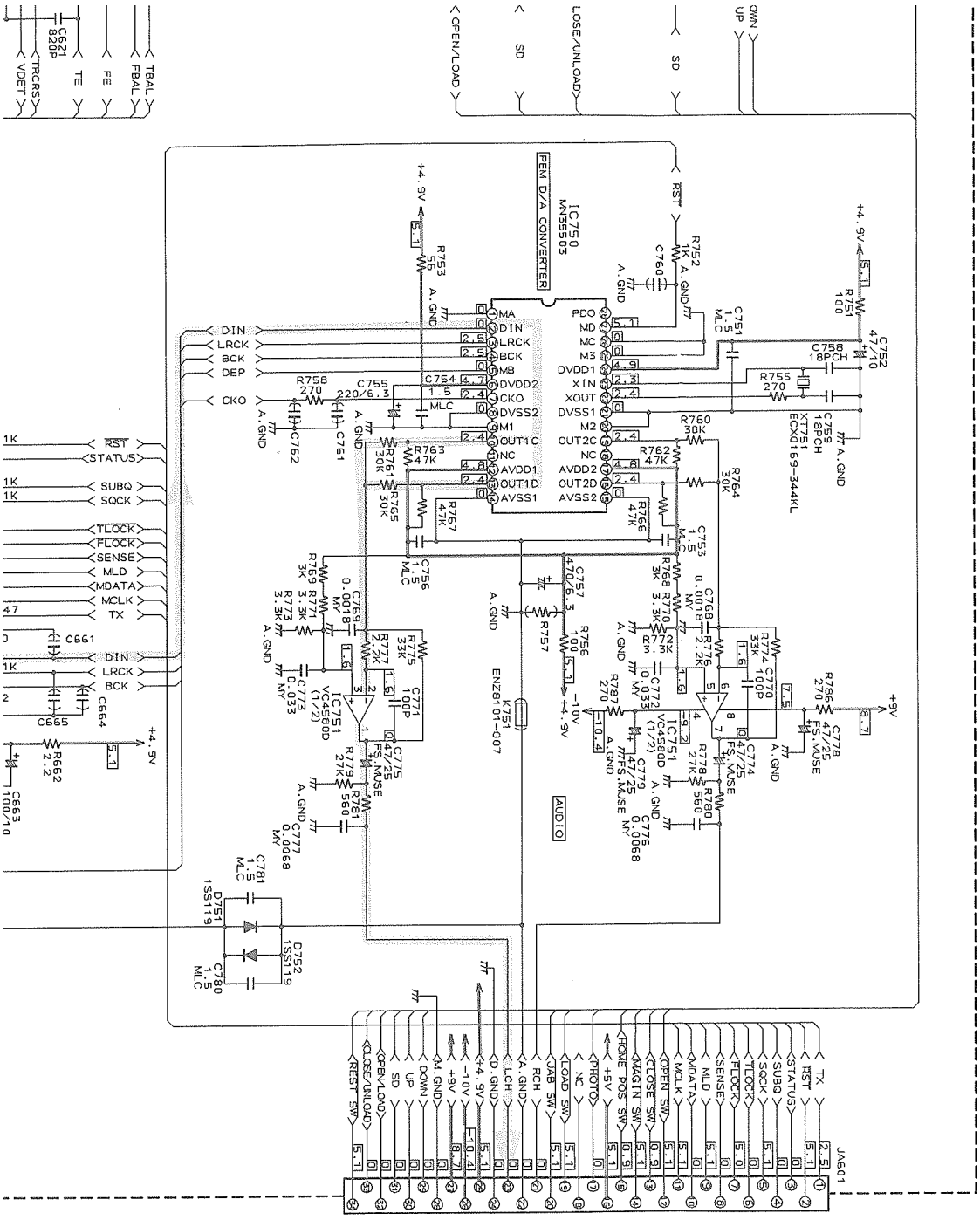
(3) CD Section


ENN-436-1
ENN-436-2
FW001
V.MOTOR
ENN-436-3
FW002
H.MOTOR
ENN-436-4
FW003
CLOSE
OPEN
S005
S003
LOAD/JAB SW
JAB
LOAD
PHOTO
PH001
GP1A53HR
R001 330
R002 4.7K
C001 0.022
S001 HOM POS SW
S002 MAG.IN SW
P001
P602
R740 1K JAB SW
R741 1K LOAD SW
V MOTOR
GND
PHOTO
+5V
R743 1K HOME POS SW
R744 1K MAGIN SW
M.GND
H MOTOR
R745 1K CLOSE SW
R746 1K OPEN SW
C732 0.022
C733 0.022
D.GND
M.GND
R727 18K
MECHA VERTICAL CONTROL
+9V
Q722 2SC2060 (Q, R)
R728 1.5K
IC720 VC4580L (1/2)
Q723 2SA934 (Q, R)
-10V
C720 0.022
C721 0.022
C735 2.2/50 N
R723 24K
R724 24K
R725 13K
R726 5.6K
Q720 DTC144ES
DOWN
UP
R732 15K
R731 15K
R730 36K
R738 36K
Q731 2SC2060 (Q, R)
Q730 DTC144ES
CLOSE/UNL
SD
C731 0.022
R739 750
C736 2.2/50 N
Q732 2SA934 (Q, R)
R733 30K
R736 36K
OPEN/LC
MECHA HORIZONTAL CONTROL
C618 0.0022
C617 0.022
R610 150K
R611 390K
C615 0.022
C616 0.022
R605 130K
R607 91K
C619 270P
R608 27K
R609 110K
C620 47P
R612 10K
C621 820P
F
E


IC650
MN662720RB
DIGITAL SERVO
&
DIGITAL SIGNAL
PROCESSER
C621 820P
TRCRS
VDET
RFENV
C604 100/10
TP1 GND
TP2 ARF
C652 0.022
R651 1K
R652 1K
R653 1K
R654 47
R670 1K
R671 1K
R672 1K
C665
R662 2.2
C663 100/10
C662 0.1TF
PMCK
SMCK
RST
STATUS
DMUTE
SUBQ
SQCK
BLKCK
TLOCK
FLOCK
SENSE
MLD
MDATA
MCLK
TX
DVSS1
DVDD1
SRDATA
LRCK
BCLK
TRV
TVD
PC
ECM
ECS
KICK
TRD
FOD
VREF
FBAL
TBAL
FE
TE
RFENV
VDET
OFT
TRCRS
RFDET
BDO
LDON
SSEL
MSEL
PSEL
CSEL
RSEL
NC3
AVSS1
NC2
AVDD1
TEST
NC1
RESY
DEMPH
CRC
CLVS
FLAG
IPFLAG
FCLK
CLDCK
BYTCK
R673 4.7K
DEP
CKO
TES
PLAY
WVEL
ARF
IREF
DRF
DSLF
PLLF
VCOF
AVDD2
AVSS2
EFM
PCK
PDO
SUBC
SBCK
VSS
X1
X2
VDD
C651 470P MY
C660 0.022 MY
R656 100K
R657 100K
R658 680
R655 1.5M
C655 0.33 TF
C658 0.1TF
C653 0.022 MY
C654 0.022 MY
R659 120K
R661 2.2
C659 100/10
+4.9V
R706 120K
R703 1.1K
C704 0.018 TF
R704 11K
R713 750
R708 7.5K
R709 22K
R707 3.3K
R710 3.9K
R714 36K
KICK
VREF
TRD
TVD
TRV
ECS
ECM
FOD
ARF
ENN-435

F G H I J

P3-34-c


PEM D/A CONVERTER
IC750
MM35503
AUDIO
IC751
VC4580D
(1/2)
K751
ENZ8101-007
XT751
ECX0169-344KL
JA601
FROM JB601 OF ENC-119-2

DX-C770

<PARTS LIST>

*** All printed circuit boards and its assemblies are not available as service parts.**

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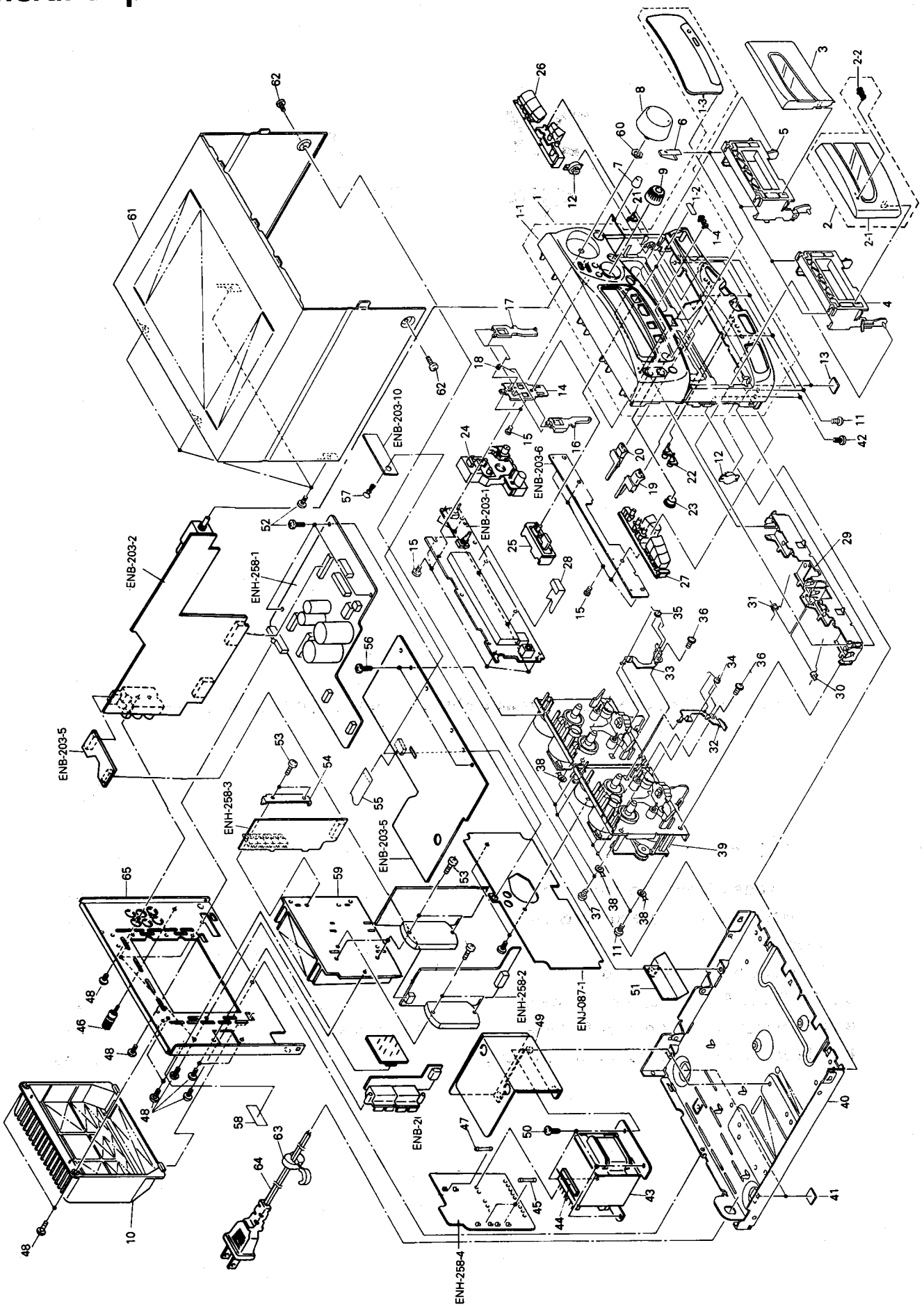
General Exploded View and Parts List

Symbol No. M 1 M M



■ Parts List

Symbol No. M 1 M M

⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	EFP-DXC770J(S)	FRONT PANEL ASSY	1		
	1-1	E102975-008SM	FRONT PANEL	1		
	1-2	E309279-002SM	WINDOW SCREEN	1	AMP	
	1-3	E69777-003	REFLECTION PLATE	2		
	1-4	E406971-221	JVC MARK	1		
	2	FSJT2003-001SA	CASSE TTE LID ASSY	1		
	2-1	FSJT2003-001	CASSETTE LID	1		
	2-2	E406971-221	JVC MARK	1		
	3	FSJT2004-222	CASSETTE LID	1		
	4	E207972-004	CASSETTE HOLDER	1	(A)	
	5	E207973-004SS	CASSETTE HOLDER	1	(B)	
	6	E406713-001	CASSETE SPRING	4		
	7	E75737-013	BALANCE KNOB	2	BALANCE	
	8	E309083-003SS	VOLUME KNOB	1		
	9	FSXP3016-001	SELECT KNOB	1	MUSIC JOG	
	10	E207356-002SM	REAR COVER	1		
	11	SBST3006Z	TAPPING SCREW	10		
	12	E304434-005	DAMPER ASSY	2		
	13	E75896-001	SPACER	2	Front foot	
	14	E308683-002	EJECT GUIDE	1		
	15	SDSF2608Z	SCREW	14		
	16	E308681-002SS	EJECT LEVER	1		
	17	E308682-002SS	EJECT LEVER	1		
	18	E407798-002	SPRING	1		
	19	E309081-002SS	EJECT BUTTON	1		
	20	E309082-002SS	EJECT BUTTON	1		
	21	E408306-001	INDICATOR	1	REC	
	22	E408305-001	INDICATOR	1	DOLBY	
	23	E408733-001SM	REMOTE LENS	1		
	24	E208421-001SM	PUSH BUTTON ASSY	1	POWER	
	25	E309286-001SM	PUSH BUTTON	1		
	26	E208426-004SM	PUSH BUTTON ASSY	1	DECK B	
	27	E208423-004SM	PUSH BUTTON ASSY	1	DECK A	
	28	VWF1225-30TTB	FFC CABLE	1	FC951	
	29	E207974-003SS	HOLDER BRACKET	1		
	30	E408058-001	HOLDER SPRING	1	(A)	
	31	E408122-001	HOLDER SPRING	1	(B)	
	32	E407799-001	EJECT SAFETY	1		
	33	E407800-001	EJECT SAFETY	1		
	34	E407801-002	SPRING	1		
	35	E407802-002	SPRING	1		
	36	SBSF3006Z	TAPPING SCREW	2		
	37	SBSF3008Z	TAPPING SCREW	4		
	38	PU49485-3	CORD CLAMP	3		
	39	----------	CASSETTE MECHANISM ASSY	1	See page 4-5	
	40	E102616-226SM	CHASSIS BASE	1		
	41	E75896-006	FELT SPACER	2	Rear foot	
	42	SBST3008M	TAPPING SCREW	2		
	43	ETP1150-55JAJ	POWER TRANSFORMER	1		
	44	E306805-145	SPACER	1	FS001	
⚠	45	QMF0007-1R25J1	FUSE	2	F101,102	
	46	E408091-001	EARTH PLUG	1		
⚠	47	QMF0007-3R15J1	FUSE	1	F001	
	48	E73273-003	SPECIAL SCREW	11		
	49	E408630-002SM	SHIELD PLATE	1		

⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	50	E65389-004	SPECIAL SCREW	4		
	51	E408678-001SM	SHIELD PLATE	1		
	52	GBSG3008CC	TAPPING SCREW	7		
	53	SBSG3014CC	SCREW	6		
	54	E406969-001SM	LEAF SPRING	1		
	55	VWF1216-14TTB	FFC CABLE	1	FC221	
	56	SPST2604Z	TAPPING SCREW	2		
	57	E48729-021	PLASTIC RIVET	1		
	58	E75803-001	CAUTION LABEL	1		J
		E75804-001	CAUTION LABEL	1		C
⚠	59	E309457-001SM	HEAT SINK	1		
	60	E71862-003	VOLUME NUT	1		
	61	E207787-009	METAL COVER	1		
	62	SDSG3006M	TAPPING SCREW	2		
⚠	63	QHS3876-162	CORD STOPPER	1		
⚠	64	QMP1D00-200H	POWER CORD	1		
	65	E208431-026SM	REAR PANEL	1		J
		E208431-027SM	REAR PANEL	1		C

⚠ : Safety Parts

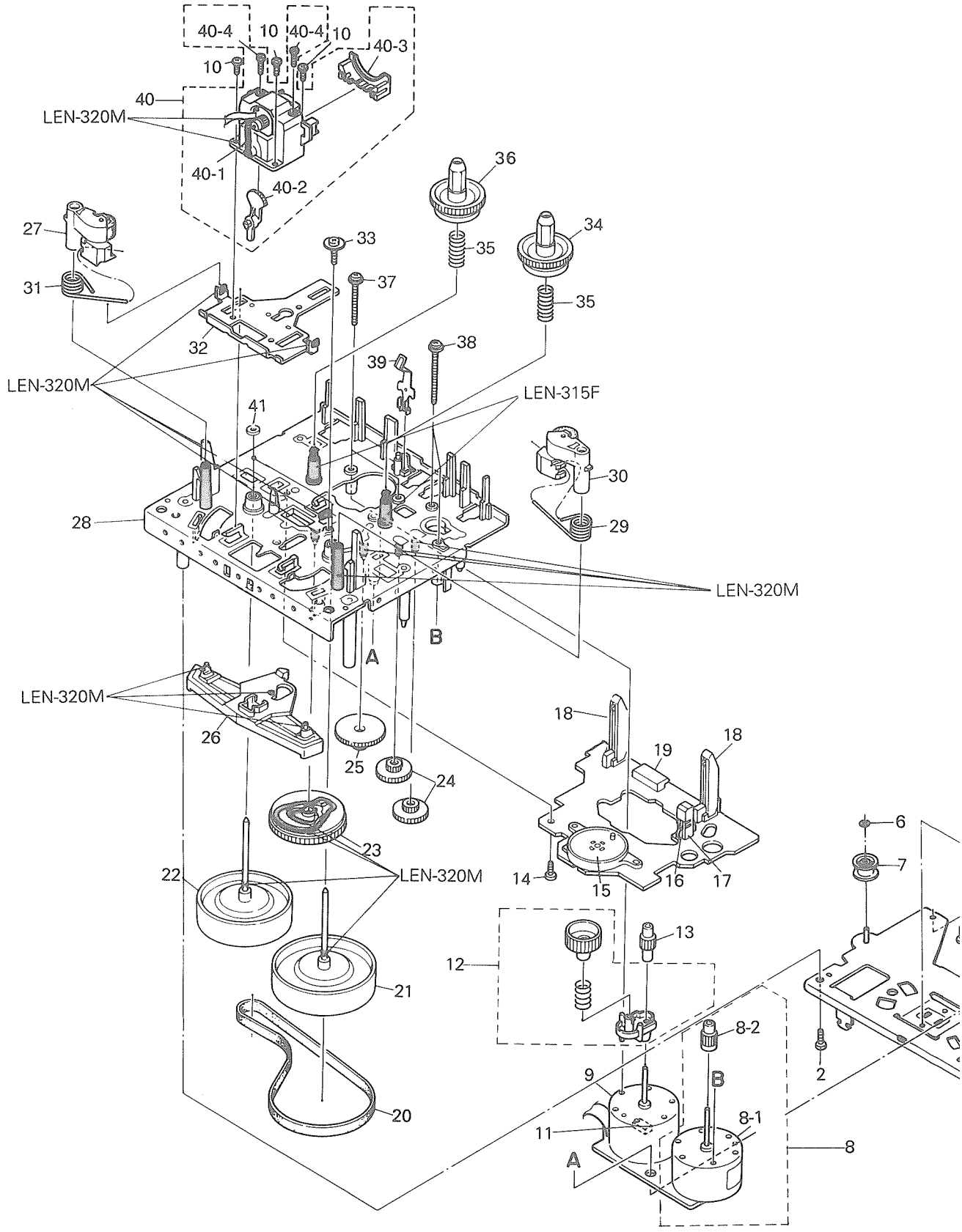
The Marks for Designated Areas

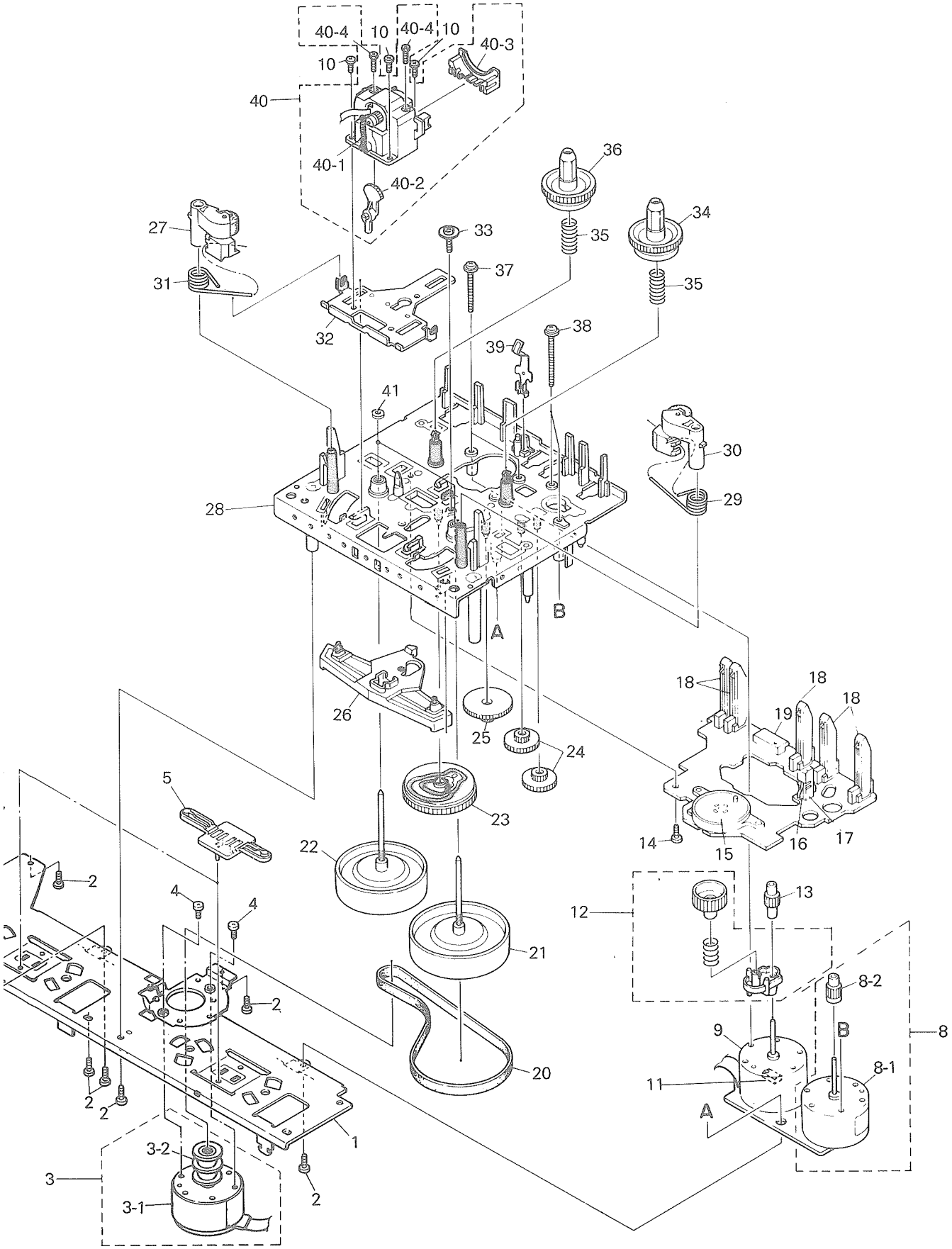
J ... the U.S.A. C .... Canada No mark indicates all area.

Cassette Mechanism Ass'y and Parts List

Symbol No. M 2 M M

■ Grease Point

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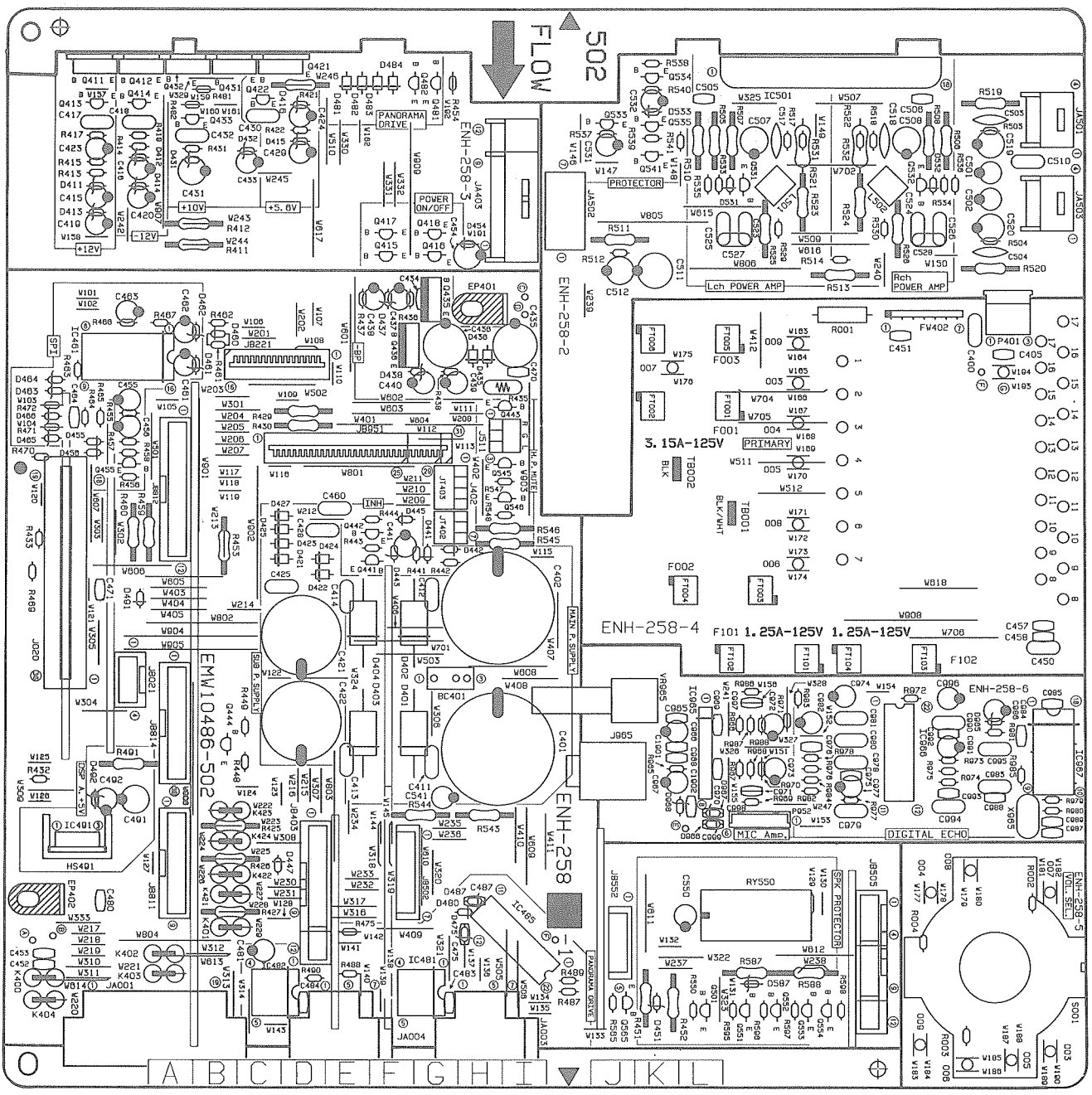
Parts List (Cassette Mechanism Ass'y)

⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	VKM3775-00AMM	FM. BKT. ASS'Y	1		
	2	SDSF2608Z	SCREW	7		
	3	MSI5U2LWA-SA1	D.C.MOTOR ASSY	1		
	3-1	MSI-5U2LWA	DC MOTOR	1		
	3-2	VKR4632-003MM	MOTOR PULLEY	1		
	4	SPSP2603Z	WOOD SCREW	2		
	5	VKS5327-005MM	LOCK PLATE	2		
	6	WDL163525-4	WASHER	1		
	7	VKR4631-005MM	IDLER PULLEY	1		
	8	MSN5D257A-SA1	DC MOTOR	2		
	8-1	MSN-5D257A	DC MOTOR	2		
	8-2	VKS5433-001	ACTUATER MOTOR GEAR	2		
	9	MMN-6F4RA38	DC MOTOR	2		
	10	SDSR2004Z	SCREW	6		
	11	VMC0234-R08	CONNECT TERMINAL	2		
	12	VKS5430-00CMM	F.F/REW.ARM	2		
	13	VKS5432-001	REEL MOTOR GEAR	2		
	14	SDST2612Z	SCREW	2		
	15	VKS3616-00A	CAM SWITCH	1		
	16	DN6851-HI	I.C(M)	2		
	17	VKS3630-001MM	I.C.PROTECTOR	2		
	18	MXS00220MVL0	CASSETTE SWITCH	7		
	19	VMC0234-R11	CONNECT TERMINAL	1	A MECHA	
		VMC0234-R14	CONNECT TERMINAL	1	B MECHA	
	20	VKB3001-064	DRIVE BELT	1	A MECHA	
		VKB3001-065	DRIVE BELT	1	B MECHA	
	21	VKF3184-00HMM	FLYWHEEL(R)ASS'	2		
	22	VKF3186-00HMM	FLYWHEEL(L)ASS'	2		
	23	VKS2224-001	CONTROL CAM	2		
	24	VKS5454-001	ACTUATER GEAR	4		
	25	VKS5455-001	ACTUATER GEAR	2		
	26	VKS3627-001	PINCH ROLLER LEVER	2		
	27	VKP4229-00B	PINCH ROLLER	2		
	28	VKS2229-00D	CHASSIS UNIT	2		
	29	VKW5045-003	PINCH ROLLER SPRING	2		
	30	VKP4227-00B	PINCH ROLLER	2		
	31	VKW5046-003	PINCH ROLLER SPRING	2		
	32	VKM3632-001	HEAD BASE	2		
	33	VKZ4708-001	SPECIAL SCREW	2		
	34	VKS5428-00B	REEL DISK	2		
	35	VKW5043-001	TENSION SPRING	4		
	36	VKS3617-002	REEL DISK	2		
	37	VKZ4705-101	SCREW	4		
	38	VKZ4705-102	SCREW	4		
	39	VKY4670-001	SPRING	2		
	40	VKS3669-00CMM	H.MOUNT ASS'Y	1	A MECHA	
		VKS3672-00CMM	H.MOUNT ASS'Y	1	B MECHA	
	40-1	VKW5126-001	HEAD SPRING	2		
	40-2	VKS3670-001	CONNECT GEAR	2		
	40-3	VKS3671-001	HEAD COVER	2		
	40-4	VKZ4629-003	SCREW	4		
	41	WDL236013	SLIT WASHER	4		

Printed Circuit Board Ass'y and Parts List

■ ENH-258 □ Power Supply PC Board Ass'y

Note : ENH-258 □ varies according to the areas employd. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Version	Dasignated Areas
ENH-258 [E]	J	the U.S.A.
ENH-258 [F]	C	Canada

TRANSISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q411	2SD2061(F,G)	SI.TRANSIST ROHM	
	Q412	2SB1187(F,G)	SI.TRANSIST ROHM	
	Q413	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q414	2SA933S(RS)	SI.TRANSIST	
	Q415	DTC144ES	DIGITAL TRA ROHM	
	Q416	DTA144ES	DIGITAL TRA ROHM	
	Q417	DTA144ES	DIGITAL TRA ROHM	
	Q418	DTC144ES	DIGITAL TRA ROHM	
	Q421	2SD2061(F,G)	SI.TRANSIST ROHM	
	Q422	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q431	2SD2061(F,G)	SI.TRANSIST ROHM	
	Q433	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q435	2SB1357(E,F)	SI.TRANSIST ROHM	
	Q436	2SD2037(E,F)	SI.TRANSIST ROHM	
	Q441	DTC114ES	DIGITAL TRA ROHM	

TRANSISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q442	DTC114YS	DIGITAL TRA ROHM	
	Q443	DTA114TS	DIGITAL TRA ROHM	
	Q444	DTA144WS	DIGITAL TRA ROHM	
	Q455	2SC1740S(R/S)	SI.TRANSIST ROHM	
	Q501	2SC1740S(R/S)	SI.TRANSIST ROHM	
	Q531	2SA933S(RS)	SI.TRANSIST	
	Q532	2SA933S(RS)	SI.TRANSIST	
	Q533	2SC1740S(R/S)	SI.TRANSIST ROHM	
	Q534	2SA733A(P/K)	SI.TRANSIST NEC	
	Q535	2SC1740S(R/S)	SI.TRANSIST ROHM	
	Q541	DTC144ES	DIGITAL TRA ROHM	
	Q545	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q546	2SD2144S(VW)	SI.TRANSIST ROHM	

I. C. S.

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC461	XR1099CP	I.C(MONO-AN EXAR JAPAN	
	IC501	STK4141MK5	I.C(HYBRID) SANYO	

DIODES

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
⚠	D401	30DL2FC	SI.DIODE NIHONINTER	
⚠	D402	30DL2FC	SI.DIODE NIHONINTER	
⚠	D403	30DL2FC	SI.DIODE NIHONINTER	
⚠	D404	30DL2FC	SI.DIODE NIHONINTER	
	D411	MTZ13JC	ZENER DIODE ROHM	
	D412	MTZ13JC	ZENER DIODE ROHM	
	D413	MTZ13JC	ZENER DIODE ROHM	
	D414	MTZ13JC	ZENER DIODE ROHM	
	D415	RD6.8JSB3	ZENER DIODE NEC	
	D416	MTZ6.8JC	ZENER DIODE ROHM	
	D421	1SR139-200	SI.DIODE ROHM	
	D422	1SR139-200	SI.DIODE ROHM	
	D423	1SR139-200	SI.DIODE ROHM	
	D424	1SR139-200	SI.DIODE ROHM	
	D425	1SR139-200	SI.DIODE ROHM	
	D427	1SR139-200	SI.DIODE ROHM	
	D431	MTZ11JC	ZENER DIODE ROHM	
	D432	MTZ12JC	ZENER DIODE ROHM	
	D435	1SR139-200	SI.DIODE ROHM	
	D436	1SR139-200	SI.DIODE ROHM	
	D437	MTZ30JC	ZENER DIODE ROHM	
	D438	MTZ6.2JC	ZENER DIODE ROHM	
	D441	1SS119	SI.DIODE	
	D442	1SS119	SI.DIODE	
	D443	MTZ5.1JC	ZENER DIODE ROHM	
	D445	1SS119	SI.DIODE	
	D447	1SS119	SI.DIODE	
	D454	1SS119	SI.DIODE	
	D455	1SS119	SI.DIODE	
	D456	1SS119	SI.DIODE	
	D461	MTZ5.1JB	ZENER DIODE ROHM	
	D462	MTZ5.1JB	ZENER DIODE ROHM	
	D463	MTZ6.8JC	ZENER DIODE ROHM	
	D464	MTZ6.8JC	ZENER DIODE ROHM	
	D465	MTZ6.8JC	ZENER DIODE ROHM	
	D531	1SS119	SI.DIODE	
	D532	1SS119	SI.DIODE	
	D533	1SS119	SI.DIODE	

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C400	QFV82AJ-104	0.1MF 100V THIN FILM	
	C401	EEW4210-688E	6800MF E.CAPACITO	
	C402	EEW4210-688E	6800MF E.CAPACITO	
	C412	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C413	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C415	QETB1CM-226	22MF 16V E.CAPACITO	
	C416	QETB1CM-226	22MF 16V E.CAPACITO	
	C417	QFLB1HJ-103	0.01MF 50V MYLAR CAPA	
	C418	QFLB1HJ-103	0.01MF 50V MYLAR CAPA	
	C419	QETB1CM-226	22MF 16V E.CAPACITO	
	C420	QETB1CM-226	22MF 16V E.CAPACITO	
	C421	QETB1VM-338	3300MF 35V AL E.CAPAC	
	C422	QETB1VM-338	3300MF 35V AL E.CAPAC	
	C423	QETB1EM-226N	22MF 25V E.CAPACITO	
	C424	QETB1AM-476	47MF 10V E.CAPACITO	

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C425	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C428	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C429	QETB1AM-476	47MF 10V E.CAPACITO	
	C430	QFLB1HJ-103	0.01MF 50V MYLAR CAPA	
	C431	QETB1CM-107	100MF 16V AL E.CAPAC	
	C432	QFLB1HJ-103	0.01MF 50V MYLAR CAPA	
	C433	QETB1CM-226	22MF 16V E.CAPACITO	
	C435	QETB1HM-227	220MF 50V E.CAPACITO	
	C436	QETB1HM-107	100MF 50V E.CAPACITO	
	C437	QETB1HM-226E	22MF 50V E.CAPACITO	
	C438	QETB1HM-226E	22MF 50V E.CAPACITO	
	C439	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C440	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C441	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C454	QETB1AM-227	220MF 10V E.CAPACITO	
	C455	QETB1HM-105	1MF 50V AL E.CAPAC	
	C456	QETB1HM-105	1MF 50V AL E.CAPAC	
	C460	QFV82AJ-104	0.1MF 100V THIN FILM	
	C461	QETB1AM-107	100MF 10V AL E.CAPAC	
	C462	QETB1AM-107	100MF 10V AL E.CAPAC	
	C463	QETB1AM-476	47MF 10V E.CAPACITO	
	C464	QCBB1HK-102Y	1000PF 50V CER.CAPACI	
	C501	EET5010-225ZE	2.2MF E.CAPACITO	
	C502	EET5010-225ZE	2.2MF E.CAPACITO	
	C503	QCS21HJ-470	47PF 50V CER.CAPACI	
	C504	QCS21HJ-470	47PF 50V CER.CAPACI	
	C505	QCBB1HK-471Y	470PF 50V CER.CAPACI	
	C506	QCBB1HK-471Y	470PF 50V CER.CAPACI	
	C507	QETB1HM-226E	22MF 50V E.CAPACITO	
	C508	QETB1HM-226E	22MF 50V E.CAPACITO	
	C510	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C511	QETB1HM-107	100MF 50V E.CAPACITO	
	C512	QETB1HM-106	10MF 50V E.CAPACITO	
	C517	QCS21HJ-100	10PF 50V CER.CAPACI	
	C518	QCS21HJ-100	10PF 50V CER.CAPACI	
	C519	EET5010-475E	4.7MF E.CAPACITO	
	C520	EET5010-475E	4.7MF E.CAPACITO	
	C523	QFV81HJ-104	0.1MF 50V THIN FILM	C
	C524	QFV81HJ-104	0.1MF 50V THIN FILM	C
	C525	QFV81HJ-104	0.1MF 50V THIN FILM	C
	C526	QFV81HJ-104	0.1MF 50V THIN FILM	C
	C527	QFLB1HJ-473	0.047MF 50V MYLAR CAPA	J
	C528	QFLB1HJ-473	0.047MF 50V MYLAR CAPA	J
	C531	QETB1EM-106	10MF 25V AL E.CAPAC	
	C532	QETB1CM-476	47MF 16V AL E.CAPAC	
	C550	QETB1HM-105	1MF 50V AL E.CAPAC	

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
⚠	R001	QRC128K-275EM	2.7M 1/2W COMPOSITIO	
⚠	R411	QRD14CJ-2R2SX	2.2 1/4W UNF.CARBON	
⚠	R412	QRD14CJ-5R6SX	5.6 1/4W UNF.CARBON	
	R413	QRD167J-153	15K 1/6W CARBON RES	
	R414	QRD167J-153	15K 1/6W CARBON RES	
	R415	QRD167J-152	1.5K 1/6W CARBON RES	
	R417	QRD167J-152	1.5K 1/6W CARBON RES	
	R418	QRD161J-222	2.2K 1/6W CARBON RES	
⚠	R421	QRD14CJ-1R0SX	1 1/4W UNF.CARBON	
	R422	QRD161J-222	2.2K 1/6W CARBON RES	
⚠	R425	QRD14CJ-3R9S	3.9 1/4W UNF.CARBON	
⚠	R426	QRD14CJ-3R9S	3.9 1/4W UNF.CARBON	
⚠	R429	QRD14CJ-3R3S	3.3 1/4W UNF.CARBON	
⚠	R430	QRD14CJ-3R3S	3.3 1/4W UNF.CARBON	
	R431	QRD161J-222	2.2K 1/6W CARBON RES	
	R432	QRD161J-102	1K 1/6W CARBON RES	
	R433	QRD161J-221	220 1/6W CARBON RES	
⚠	R435	PTH61G25AR4R7M	POSITIVE T	
	R436	QRD167J-332	3.3K 1/6W CARBON RES	
	R437	QRD167J-223	22K 1/6W CARBON RES	
	R438	QRD161J-104	100K 1/6W CARBON RES	
	R441	QRD161J-103	10K 1/6W CARBON RES	
	R442	QRD161J-103	10K 1/6W CARBON RES	
	R443	QRD161J-103	10K 1/6W CARBON RES	
	R444	QRD161J-102	1K 1/6W CARBON RES	
	R448	QRD161J-103	10K 1/6W CARBON RES	
	R449	QRD161J-222	2.2K 1/6W CARBON RES	
	R451	QRD14CJ-820SX	82 1/4W CARBON RES	
⚠	R452	QRZ0077-820	82 1/4W FUSIBLE RE	
⚠	R453	QRD14CJ-4R7S	4.7 1/4W UNF.CARBON	
	R454	QRD161J-102	1K 1/6W CARBON RES	
	R455	QRD167J-562	5.6K 1/6W CARBON RES	
	R456	QRD161J-103	10K 1/6W CARBON RES	
	R457	QRD161J-222	2.2K 1/6W CARBON RES	
	R458	QRD161J-104	100K 1/6W CARBON RES	

DX-C770

RESISTORS

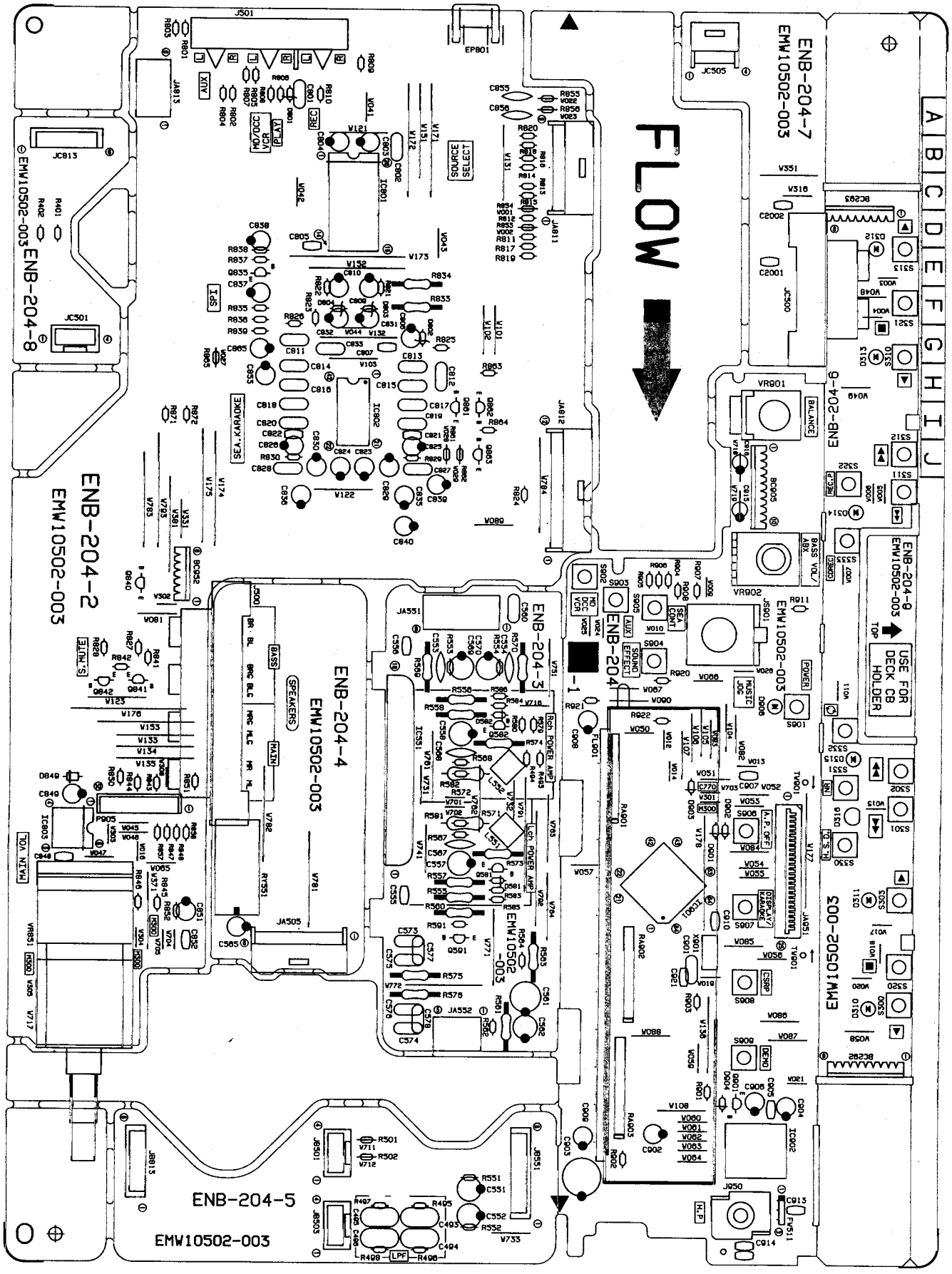
△	ITEM	PART NUMBER	DESCRIPTION			AREA
△	R459	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
△	R460	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
	R461	QRD161J-331	330	1/6W	CARBON RES	
	R462	QRD161J-331	330	1/6W	CARBON RES	
	R463	QRD167J-223	22K	1/6W	CARBON RES	
	R464	QRD167J-152	1.5K	1/6W	CARBON RES	
	R465	QRD167J-562	5.6K	1/6W	CARBON RES	
	R466	QRD167J-223	22K	1/6W	CARBON RES	
	R467	QRD161J-102	1K	1/6W	CARBON RES	
	R469	QRD161J-102	1K	1/6W	CARBON RES	
	R503	QRD161J-563	56K	1/6W	CARBON RES	
	R504	QRD161J-563	56K	1/6W	CARBON RES	
△	R505	QRD14CJ-272S	2.7K	1/4W	UNF.CARBON	
△	R506	QRD14CJ-272S	2.7K	1/4W	UNF.CARBON	
△	R507	QRD14CJ-272S	2.7K	1/4W	UNF.CARBON	
△	R508	QRD14CJ-272S	2.7K	1/4W	UNF.CARBON	
△	R510	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
△	R511	QRD14CJ-101S	100	1/4W	UNF.CARBON	
	R512	QRD167J-272	2.7K	1/6W	CARBON RES	
△	R513	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
	R514	QRD167J-272	2.7K	1/6W	CARBON RES	
	R517	QRD161J-563	56K	1/6W	CARBON RES	
	R518	QRD161J-563	56K	1/6W	CARBON RES	
△	R519	QRD14CJ-561SX	560	1/4W	UNF.CARBON	
△	R520	QRD14CJ-561SX	560	1/4W	UNF.CARBON	
△	R521	QRX012J-R22AM	0.22	1W	METAL FILM	
△	R522	QRX012J-R22AM	0.22	1W	METAL FILM	
△	R523	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
△	R524	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
△	R525	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
△	R526	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
	R529	QRD161J-104	100K	1/6W	CARBON RES	
	R530	QRD161J-823	82K	1/6W	CARBON RES	
	R531	QRD167J-272	2.7K	1/6W	CARBON RES	
	R532	QRD167J-272	2.7K	1/6W	CARBON RES	
	R533	QRD167J-153	15K	1/6W	CARBON RES	
	R534	QRD167J-153	15K	1/6W	CARBON RES	
	R535	QRD161J-103	10K	1/6W	CARBON RES	
	R536	QRD161J-103	10K	1/6W	CARBON RES	
	R537	QRD161J-103	10K	1/6W	CARBON RES	
	R538	QRD161J-104	100K	1/6W	CARBON RES	
	R539	QRD161J-103	10K	1/6W	CARBON RES	
	R540	QRD161J-473	47K	1/6W	CARBON RES	
	R541	QRD161J-103	10K	1/6W	CARBON RES	
	R543	QRD14CJ-821SX	820	1/4W	CARBON RES	
	R544	QRD14CJ-821SX	820	1/4W	CARBON RES	
	R545	QRD14CJ-331SX	330	1/4W	UNF.CARBON	
	R546	QRD14CJ-331SX	330	1/4W	UNF.CARBON	
	R547	QRD161J-473	47K	1/6W	CARBON RES	
	R548	QRD161J-473	47K	1/6W	CARBON RES	
	R550	QRD167J-152	1.5K	1/6W	CARBON RES	

OTHERS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10486-502	PRINTED BOA	
	J511	EMV7145-003Z	SOCKET ASSY	
	L501	EQL0011-R45J1	INDUCTOR	
	L502	EQL0011-R45J1	INDUCTOR	
	P401	EMV5133-003KR	CONNECT TER	
	BC401	EWS243-074	SOCKET WIRE	
	EP401	EMZ4002-001Z	EARTH PLATE	
	EP402	EMZ4002-001Z	EARTH PLATE	
	EP565	EMZ4002-001Z	EARTH PLATE	
	FT001	VMZ0087-001Z	FUSE HOLDER	
	FT002	VMZ0087-001Z	FUSE HOLDER	
	FT101	VMZ0087-001Z	FUSE HOLDER	
	FT102	VMZ0087-001Z	FUSE HOLDER	
	FT103	VMZ0087-001Z	FUSE HOLDER	
	FT104	VMZ0087-001Z	FUSE HOLDER	
	FW402	EWR37D-13LS	CORD	
	JA001	EMV7127-019	CONNECT TER	
	JA403	EMV5163-009R	CONNECT TER	
	JA501	EMV5163-004R	CONNECT TER	
	JA502	EMV7125-007R	CONNECT TER	
	JA503	EMV5163-004R	CONNECT TER	
	JB221	VMC0161-016	CONNECT TER	
	JB403	EMV7163-009	CONNECT TER	
	JB502	EMV5125-007	MALE CONNEC	
	JB505	EMV7163-009	CONNECT TER	
	JB552	EMV5125-005	CONNECT TER	
	JB811	EMV7163-009	CONNECT TER	
	JB812	EMV7163-012	CONNECT TER	
	JB951	VMC0161-025	CONNECT TER	
	JT402	EMV7145-003Z	SOCKET ASSY	
	JT403	EMV7145-004Z	SOCKET ASSY	
	RY550	ESK7D24-2120	RELAY	
	TB001	EMZ4001-001	TAB	
	TB002	EMZ4001-001	TAB	

■ ENB-204 □ System Control & Power Amp PC Board Ass'y

Note : ENB-204 □ varies according to the areas employd. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Version	Dasignated Areas
ENB-204 [A]	J	the U.S.A.
ENB-204 [B]	C	Canada

TRANSISTORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q581	2SA933S(RS)	SI.TRANSIST	
	Q582	2SA933S(RS)	SI.TRANSIST	
	Q591	DTC144ES	DIGITAL TRA ROHM	
	Q835	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q840	DTA144ES	DIGITAL TRA ROHM	
	Q841	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q842	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q901	DTC114YS	DIGITAL TRA ROHM	

I. C. S.

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC551	STK4141MK5	I.C(HYBRID) SANYO	
	IC801	TC9162N	I.C(DIGI-MO TOSHIBA	
	IC802	M62423FP	I.C(M) MITSUBISHI	
	IC803	LB1639-CV	I.C(DIGI-OT SANYO	
	IC901	MN172412J5S	I.C(MICRO-C MATSUSHITA	
	IC902	SPS-420-1	INFRARED DE SANYO	

DIODES

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	D310	SLR-342MCA47	L.E.D. ROHM	
	D311	SLR-342MCA47	L.E.D. ROHM	
	D312	SLR-342MCA47	L.E.D. ROHM	
	D313	SLR-342MCA47	L.E.D. ROHM	
	D314	SLR-342VC3F	L.E.D. ROHM	
	D315	SLR-342VC3F	L.E.D. ROHM	
	D316	SPR-39MVWF	L.E.D. ROHM	
	D581	1SS119	SI.DIODE	
	D582	1SS119	SI.DIODE	
	D801	MTZ3.0JB	ZENER DIODE ROHM	
	D802	MTZ5.1JC	ZENER DIODE ROHM	
	D803	MTZ7.5JC	ZENER DIODE ROHM	
	D804	MTZ7.5JC	ZENER DIODE ROHM	
	D849	1SR139-200	SI.DIODE ROHM	
	D901	1SS119	SI.DIODE	
	D902	1SS119	SI.DIODE	
	D903	1SS119	SI.DIODE	
	D904	1SS119	SI.DIODE	
	D906	SLR-342VC3F	L.E.D. ROHM	

CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	C493	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C494	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C551	EET5010-225ZE	2.2MF E.CAPACITO	
	C552	EET5010-225ZE	2.2MF E.CAPACITO	
	C553	QCS21HJ-470	47PF 50V CER.CAPACI	
	C554	QCS21HJ-470	47PF 50V CER.CAPACI	
	C555	QCBB1HK-151	150PF 50V CER.CAPACI	
	C556	QCBB1HK-151	150PF 50V CER.CAPACI	
	C557	QETB1HM-226E	22MF 50V E.CAPACITO	
	C558	QETB1HM-226E	22MF 50V E.CAPACITO	
	C560	QFV81HJ-103	0.01MF 50V THIN FILM	
	C561	QETB1HM-107	100MF 50V E.CAPACITO	
	C562	QETB1HM-106	10MF 50V E.CAPACITO	
	C565	QETB1HM-105	1MF 50V AL E.CAPAC	
	C567	QCS21HJ-100	10PF 50V CER.CAPACI	
	C568	QCS21HJ-100	10PF 50V CER.CAPACI	
	C569	EET5010-226ZE	22MF E.CAPACITO	
	C570	EET5010-226ZE	22MF E.CAPACITO	
	C573	QFV81HJ-104	0.1MF 50V THIN FILM	C
	C574	QFV81HJ-104	0.1MF 50V THIN FILM	C
	C575	QFV81HJ-104	0.1MF 50V THIN FILM	C
	C576	QFV81HJ-104	0.1MF 50V THIN FILM	C
	C577	QFV81HJ-473	0.047MF 50V THIN FILM	J
	C578	QFV81HJ-473	0.047MF 50V THIN FILM	J
	C801	QFN81HJ-103	0.01MF 50V METAL.MYLA	

CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	C802	QFN31HJ-103	0.01MF 50V METAL.MYLA	
	C803	QETB1CM-107	100MF 16V AL E.CAPAC	
	C804	QETB1CM-107	100MF 16V AL E.CAPAC	
	C805	QCBB1HK-561Y	560PF 50V CER.CAPACI	
	C806	QETB1AM-107	100MF 10V AL E.CAPAC	
	C807	QCBB1HK-561Y	560PF 50V CER.CAPACI	
	C809	QETB1HM-106	10MF 50V E.CAPACITO	
	C810	QETB1HM-106	10MF 50V E.CAPACITO	
	C811	QFN81HJ-103	0.01MF 50V METAL.MYLA	
	C812	QFV81HJ-104	0.1MF 50V THIN FILM	
	C813	QFV71HJ-683ZM	0.068MF 50V THIN FILM	
	C814	QFV71HJ-683ZM	0.068MF 50V THIN FILM	
	C815	QFV71HJ-184ZM	0.18MF 50V CAPACITOR	
	C816	QFV71HJ-184ZM	0.18MF 50V CAPACITOR	
	C817	QFN81HJ-472	4700PF 50V MYLAR CAPA	
	C818	QFN81HJ-472	4700PF 50V MYLAR CAPA	
	C819	QFV81HJ-273	0.027MF 50V THIN FILM	
	C820	QFV81HJ-273	0.027MF 50V THIN FILM	
	C821	QCXB1CM-222Y	2200PF 16V CER.CAPACI	
	C822	QCXB1CM-222Y	2200PF 16V CER.CAPACI	
	C823	QETB1HM-106	10MF 50V E.CAPACITO	
	C824	QETB1HM-106	10MF 50V E.CAPACITO	
	C825	QETB1HM-106	10MF 50V E.CAPACITO	
	C826	QETB1HM-106	10MF 50V E.CAPACITO	
	C831	QETB1AM-107	100MF 10V AL E.CAPAC	
	C832	QETB1AM-107	100MF 10V AL E.CAPAC	
	C833	QFN81HJ-103	0.01MF 50V METAL.MYLA	
	C837	QETB1HM-105	1MF 50V AL E.CAPAC	
	C838	QETB1HM-474	0.47MF 50V ELECTRO	
	C839	QETB1HM-106	10MF 50V E.CAPACITO	
	C840	QETB1HM-106	10MF 50V E.CAPACITO	
	C848	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C849	QETB1AM-107	100MF 10V AL E.CAPAC	
	C851	QETB1CM-226	22MF 16V E.CAPACITO	
	C852	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	
	C853	QETB1HM-105	1MF 50V AL E.CAPAC	
	C855	QCS31HJ-391Z	390PF 50V CER.CAPACI	
	C856	QCS31HJ-391Z	390PF 50V CER.CAPACI	
	C865	QETB1CM-107	100MF 16V AL E.CAPAC	
	C902	QER50JM-107	100MF 6.3V AL E.CAPAC	
	C903	QETB0JM-108N	1000MF 6.3V E.CAPACITO	
	C904	QER51HM-225G	2.2MF 50V AL E.CAPAC	
	C905	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	
	C906	QER50JM-107	100MF 6.3V AL E.CAPAC	
	C907	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	
	C908	QEK51HM-226	22MF 50V AL E.CAPAC	
	C909	QEK51HM-226	22MF 50V AL E.CAPAC	
	C910	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	
	C921	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	R493	QRD167J-682	6.8K 1/6W CARBON RES	
	R494	QRD167J-682	6.8K 1/6W CARBON RES	
	R495	QRD167J-562	5.6K 1/6W CARBON RES	
	R496	QRD167J-562	5.6K 1/6W CARBON RES	
	R551	QRD161J-471	470 1/6W CARBON RES	
	R552	QRD161J-471	470 1/6W CARBON RES	
	R553	QRD161J-563	56K 1/6W CARBON RES	
	R554	QRD161J-563	56K 1/6W CARBON RES	
△	R555	QRD14CJ-272S	2.7K 1/4W UNF.CARBON	
△	R556	QRD14CJ-272S	2.7K 1/4W UNF.CARBON	
△	R557	QRD14CJ-272S	2.7K 1/4W UNF.CARBON	
△	R558	QRD14CJ-272S	2.7K 1/4W UNF.CARBON	
△	R560	QRD14CJ-100SX	10 1/4W UNF.CARBON	
△	R561	QRD14CJ-101S	100 1/4W UNF.CARBON	
	R562	QRD167J-272	2.7K 1/6W CARBON RES	
△	R563	QRD14CJ-100SX	10 1/4W UNF.CARBON	
	R564	QRD167J-272	2.7K 1/6W CARBON RES	
	R567	QRD161J-563	56K 1/6W CARBON RES	
	R568	QRD161J-563	56K 1/6W CARBON RES	
△	R569	QRD14CJ-471SX	470 1/4W UNF.CARBON	
△	R570	QRD14CJ-471SX	470 1/4W UNF.CARBON	
△	R571	QRX012J-R22AM	0.22 1W METAL FILM	
△	R572	QRX012J-R22AM	0.22 1W METAL FILM	
△	R573	QRD14CJ-100SX	10 1/4W UNF.CARBON	
△	R574	QRD14CJ-100SX	10 1/4W UNF.CARBON	
△	R575	QRD14CJ-100SX	10 1/4W UNF.CARBON	
△	R576	QRD14CJ-100SX	10 1/4W UNF.CARBON	
	R579	QRD161J-104	100K 1/6W CARBON RES	
	R580	QRD161J-823	82K 1/6W CARBON RES	
	R581	QRD167J-272	2.7K 1/6W CARBON RES	
	R582	QRD167J-272	2.7K 1/6W CARBON RES	
	R583	QRD167J-153	15K 1/6W CARBON RES	
	R584	QRD167J-153	15K 1/6W CARBON RES	
	R585	QRD161J-103	10K 1/6W CARBON RES	
	R586	QRD161J-103	10K 1/6W CARBON RES	
	R591	QRD161J-103	10K 1/6W CARBON RES	
	R801	QRD167J-223	22K 1/6W CARBON RES	
	R802	QRD167J-223	22K 1/6W CARBON RES	
	R803	QRD161J-513	51K 1/6W CARBON RES	
	R804	QRD161J-513	51K 1/6W CARBON RES	
	R805	QRD167J-223	22K 1/6W CARBON RES	
	R806	QRD167J-223	22K 1/6W CARBON RES	
	R807	QRD161J-513	51K 1/6W CARBON RES	
	R808	QRD161J-513	51K 1/6W CARBON RES	
	R809	QRD161J-182	1.8K 1/6W CARBON RES	

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R810	QRD161J-182	1.8K	1/6W	CARBON RES	
	R811	QRD161J-392	3.9K	1/6W	CARBON RES	
	R812	QRD161J-392	3.9K	1/6W	CARBON RES	
	R813	QRD161J-182	1.8K	1/6W	CARBON RES	
	R814	QRD161J-182	1.8K	1/6W	CARBON RES	
	R815	QRD161J-911	910	1/6W	CARBON RES	
	R816	QRD161J-911	910	1/6W	CARBON RES	
	R817	QRD161J-122	1.2K	1/6W	CARBON RES	
	R818	QRD161J-122	1.2K	1/6W	CARBON RES	
	R819	QRD161J-222	2.2K	1/6W	CARBON RES	
	R820	QRD161J-222	2.2K	1/6W	CARBON RES	
	R821	QRD161J-104	100K	1/6W	CARBON RES	
	R822	QRD161J-104	100K	1/6W	CARBON RES	
	R823	QRD161J-221	220	1/6W	CARBON RES	
	R824	QRD161J-331	330	1/6W	CARBON RES	
	R825	QRD161J-221	220	1/6W	CARBON RES	
	R826	QRD161J-224	220K	1/6W	CARBON RES	
	R827	QRD161J-221	220	1/6W	CARBON RES	
	R828	QRD161J-221	220	1/6W	CARBON RES	
	R829	QRD161J-103	10K	1/6W	CARBON RES	
	R830	QRD161J-103	10K	1/6W	CARBON RES	
	R833	QRD14CJ-151SX	150	1/4W	UNF.CARBON	
	R834	QRD14CJ-151SX	150	1/4W	UNF.CARBON	
	R835	QRD161J-224	220K	1/6W	CARBON RES	
	R836	QRD161J-224	220K	1/6W	CARBON RES	
	R837	QRD161J-105	1M	1/6W	CARBON RES	
	R838	QRD161J-222	2.2K	1/6W	CARBON RES	
	R839	QRD161J-222	2.2K	1/6W	CARBON RES	
	R841	QRD161J-103	10K	1/6W	CARBON RES	
	R842	QRD161J-103	10K	1/6W	CARBON RES	
	R843	QRD167J-822	8.2K	1/6W	CARBON RES	
	R844	QRD167J-822	8.2K	1/6W	CARBON RES	
	R845	QRD161J-203	20K	1/6W	CARBON RES	
	R846	QRD161J-203	20K	1/6W	CARBON RES	
	R847	QRD167J-682	6.8K	1/6W	CARBON RES	
	R848	QRD167J-682	6.8K	1/6W	CARBON RES	
	R850	QRD161J-331	330	1/6W	CARBON RES	
	R851	QRD161J-102	1K	1/6W	CARBON RES	
	R852	QRD161J-102	1K	1/6W	CARBON RES	
	R855	QRD161J-163	16K	1/6W	CARBON RES	
	R856	QRD161J-163	16K	1/6W	CARBON RES	
	R857	QRD167J-682	6.8K	1/6W	CARBON RES	
	R858	QRD167J-682	6.8K	1/6W	CARBON RES	
	R865	QRD161J-331	330	1/6W	CARBON RES	
	R871	QRD167J-511	510	1/6W	CARBON RES	
	R872	QRD167J-511	510	1/6W	CARBON RES	
	R901	QRD161J-104	100K	1/6W	CARBON RES	
	R902	QRD161J-470	47	1/6W	CARBON RES	
	R903	QRD161J-103	10K	1/6W	CARBON RES	
	R904	QRD161J-103	10K	1/6W	CARBON RES	
	R905	QRD161J-103	10K	1/6W	CARBON RES	
	R906	QRD161J-103	10K	1/6W	CARBON RES	
	R907	QRD161J-103	10K	1/6W	CARBON RES	
	R908	QRD161J-103	10K	1/6W	CARBON RES	
	R911	QRD161J-221	220	1/6W	CARBON RES	
	R920	QRD161J-104	100K	1/6W	CARBON RES	
	R921	QRD161J-104	100K	1/6W	CARBON RES	
	R922	QRD161J-104	100K	1/6W	CARBON RES	
	VR851	QVDC94B-E15FJ5	100K		VARIABLE R	
	VR901	QVGA81W-E15B	100K		VARIABLE R	
	VR902	QVJ884A-E53FJ3	5K		VARIABLE R	

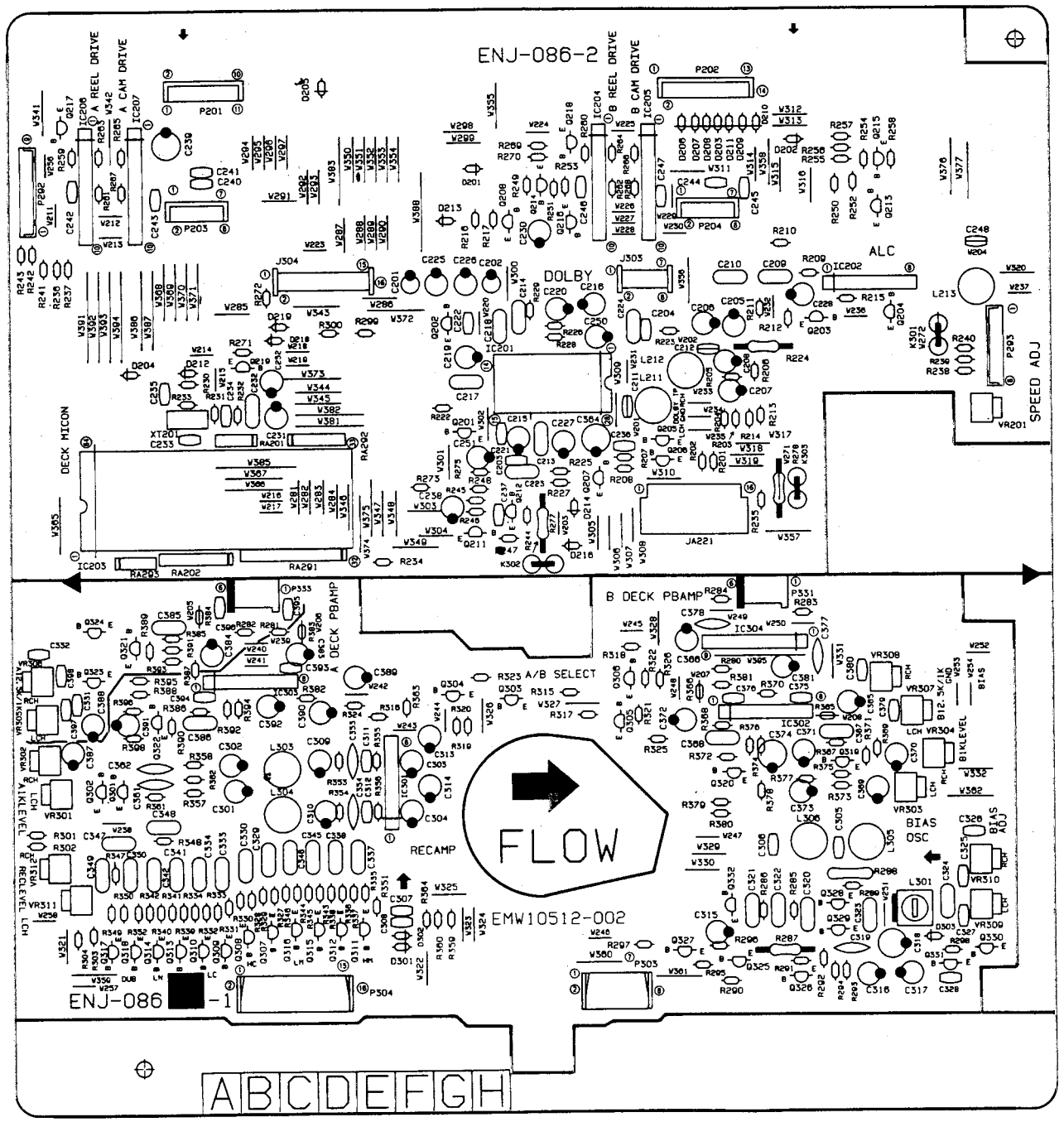
OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10502-003	PRINTED BOA	
		VYH7653-001	SPRING	
		VYH7653-002	I.C.SOCKET	
	J500	EMB10TV-801A	SPEAKER TER	
	J501	EMN00TV-612AJ2	PIN JACK	
	J950	QMS3R81-EE0S	HEADPHONE J	
	L551	EQL0011-R45J1	INDUCTOR	
	L552	EQL0011-R45J1	INDUCTOR	
	P905	EMV5142-910	CONNECT TER	
	S300	ESP0001-023M	TACT SWITCH ▶ (DECK B)	
	S301	ESP0001-023M	TACT SWITCH ⏭ (DECK B)	
	S302	ESP0001-023M	TACT SWITCH ⏮ (DECK B)	
	S303	ESP0001-023M	TACT SWITCH ◀ (DECK B)	
	S310	ESP0001-023M	TACT SWITCH ▶ (DECK A)	
	S311	ESP0001-023M	TACT SWITCH ⏭ (DECK A)	
	S312	ESP0001-023M	TACT SWITCH ⏮ (DECK A)	
	S313	ESP0001-023M	TACT SWITCH ◀ (DECK A)	
	S320	ESP0001-023M	TACT SWITCH ■ (DECK B)	
	S321	ESP0001-023M	TACT SWITCH ■ (DECK A)	
	S322	ESP0001-023M	TACT SWITCH REC.POUSE	
	S330	ESP0001-023M	TACT SWITCH H.S.D.	
	S331	ESP0001-023M	TACT SWITCH NR	
	S332	ESP0001-023M	TACT SWITCH REPEAT	
	S333	ESP0001-023M	TACT SWITCH CD REC	
	S901	ESP0001-023M	TACT SWITCH POWER	
	S902	ESP0001-023M	TACT SWITCH MD/DCC/VCR	
	S903	ESP0001-023M	TACT SWITCH AUX	
	S904	ESP0001-023M	TACT SWITCH SOUN DEFFECT	
	S905	ESP0001-023M	TACT SWITCH SEA CONTROL	
	S906	ESP0001-023M	TACT SWITCH A.P.OFF	
	S907	ESP0001-023M	TACT SWITCH DISPLAY/KARAOKE	
	S908	ESP0001-023M	TACT SWITCH CSRP	
	S909	ESP0001-023M	TACT SWITCH DEMO	
	X901	ECX0060-000EM	CERAMIC RES	
	BC292	EWS329-A919J	SOCKET WIRE	
	BC293	EWS328-A924J	SOCKET WIRE	
	BC905	EWS32A-A913	SOCKET WIRE	
	BK901	E309282-001SM	FL HOLDER	
	FL901	ELU0001-195	FLUORESCENT	
	FS316	E407620-002	SPACER	
	FS855	E3400-431	FELT SPACER	
	FS856	E3400-431	FELT SPACER	
	FS901	E306805-014	FELT SPACER	
	FW511	EWR33D-30LS	FLAT WIRE A	
	JA505	EMV5163-009R	CONNECT TER	
	JA551	EMV7125-008R	MALE CONNEC	
	JA552	EMV7125-005R	CONNECT TER	
	JA811	EMV5163-009R	CONNECT TER	
	JA812	EMV5163-012R	CONNECT TER	
	JA813	EMV7125-006R	CONNECT TER	
	JA951	VMC0161-025	CONNECT TER	
	JB501	EMV7163-004	CONNECT TER	
	JB503	EMV7163-004	CONNECT TER	
	JB551	EMV5125-008	MALE CONNEC	
	JB813	EMV5125-006	CONNECT TER	
	JS901	QSJ1003-E01	PUSH SWITCH	
	RY551	ESK7D24-2120	RELAY	
	TW901	QWE350-08RR	VINYL WIRE	

DX-C770

■ ENJ-086 □ Deck Control PC Board Ass'y

Note : ENJ-086 □ varies according to the areas employd. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Version	Dasignated Areas
ENJ-086 [C]	J	the U.S.A.
ENJ-086 [D]	C	Canada

TRANSISTORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q201	DTC144ES	DIGITAL TRA ROHM	
	Q202	DTC144ES	DIGITAL TRA ROHM	
	Q203	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q204	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q205	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q206	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q207	DTA144ES	DIGITAL TRA ROHM	
	Q208	DTA114YS	DIGITAL TRA ROHM	
	Q211	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q212	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q213	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q214	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q215	2SA933S(RS)	SI.TRANSIST	
	Q216	2SA933S(RS)	SI.TRANSIST	
	Q217	DTC144ES	DIGITAL TRA ROHM	
	Q218	DTC144ES	DIGITAL TRA ROHM	
	Q219	DTC144ES	DIGITAL TRA ROHM	
	Q301	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q302	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q303	2SC1740S(R,S)	SI.TRANSIST ROHM	

TRANSISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q304	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q305	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q306	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q307	DTC144TS	DIGITAL TRA ROHM	
	Q308	DTC144TS	DIGITAL TRA ROHM	
	Q309	DTC144TS	DIGITAL TRA ROHM	
	Q310	DTC144TS	DIGITAL TRA ROHM	
	Q311	DTC144TS	DIGITAL TRA ROHM	
	Q312	DTC144TS	DIGITAL TRA ROHM	
	Q313	DTC144TS	DIGITAL TRA ROHM	
	Q314	DTC144TS	DIGITAL TRA ROHM	
	Q315	DTC144TS	DIGITAL TRA ROHM	
	Q316	DTC144TS	DIGITAL TRA ROHM	
	Q317	DTC144TS	DIGITAL TRA ROHM	
	Q318	DTC144TS	DIGITAL TRA ROHM	
	Q319	2SA933S(RS)	SI.TRANSIST	
	Q320	2SA933S(RS)	SI.TRANSIST	
	Q321	2SA933S(RS)	SI.TRANSIST	
	Q322	2SA933S(RS)	SI.TRANSIST	
	Q323	DTC144ES	DIGITAL TRA ROHM	
	Q324	DTC144ES	DIGITAL TRA ROHM	
	Q325	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q326	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q327	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q328	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q329	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q332	DTC144ES	DIGITAL TRA ROHM	

I. C. S.

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC201	AN7374K	I.C(MONO-AN MATSUSHITA	
	IC202	BA8221AN	I.C(MONO-AN ROHM	
	IC203	HD614081SE39	I.C(MICRO-C HITACHI	
	IC204	LB1641	I.C(DIGI-OT SANYO	
	IC205	LB1641	I.C(DIGI-OT SANYO	
	IC206	LB1641	I.C(DIGI-OT SANYO	
	IC207	LB1641	I.C(DIGI-OT SANYO	
	IC301	BA15218N	I.C(MONO-AN ROHM	
	IC302	UPC1228HA	I.C(MONO-AN NEC	
	IC303	UPC1228HA	I.C(MONO-AN NEC	
	IC304	UPC1330HA	I.C(MONO-AN NEC	

DIODES

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D201	1SS119	SI.DIODE	
	D202	1SS119	SI.DIODE	
	D203	1SS119	SI.DIODE	
	D204	1SS119	SI.DIODE	
	D205	1SS119	SI.DIODE	
	D206	1SS119	SI.DIODE	
	D207	1SS119	SI.DIODE	
	D208	1SS119	SI.DIODE	
	D209	1SS119	SI.DIODE	
	D210	1SS119	SI.DIODE	
	D211	1SS119	SI.DIODE	
	D212	1SS119	SI.DIODE	
	D213	1SS119	SI.DIODE	
	D214	1SS119	SI.DIODE	
	D216	1SS119	SI.DIODE	
	D218	1SS119	SI.DIODE	
	D219	1SS119	SI.DIODE	
	D301	1SS119	SI.DIODE	
	D302	1SS119	SI.DIODE	

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C201	QEK51HM-105G	1MF	50V	AL E.CAPAC	
	C202	QEK51HM-105G	1MF	50V	AL E.CAPAC	
	C203	QCBB1HK-101Y	100PF	50V	CER.CAPACI	
	C204	QCBB1HK-101Y	100PF	50V	CER.CAPACI	
	C205	QEK51HM-105G	1MF	50V	AL E.CAPAC	
	C206	QEK51HM-105G	1MF	50V	AL E.CAPAC	
	C207	QETB1HM-106	10MF	50V	E.CAPACITO	
	C208	QETB1HM-106	10MF	50V	E.CAPACITO	
	C209	QFN81HJ-473	0.047MF	50V	METAL.MYLA	
	C210	QFN81HJ-473	0.047MF	50V	METAL.MYLA	
	C211	QCBB1HK-101Y	100PF	50V	CER.CAPACI	
	C212	QCBB1HK-101Y	100PF	50V	CER.CAPACI	
	C213	QFN81HJ-152	1500PF	50V	METAL.MYLA	
	C214	QFN81HJ-152	1500PF	50V	METAL.MYLA	
	C215	QEK51HM-474G	0.47MF	50V	AL E.CAPAC	
	C216	QEK51HM-474G	0.47MF	50V	AL E.CAPAC	
	C217	QFN81HJ-152	1500PF	50V	METAL.MYLA	
	C218	QFN81HJ-152	1500PF	50V	METAL.MYLA	
	C219	QEK51HM-474G	0.47MF	50V	AL E.CAPAC	
	C220	QEK51HM-474G	0.47MF	50V	AL E.CAPAC	

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C223	QFN81HJ-272	2700PF	50V	METAL.MYLA	
	C224	QFN81HJ-272	2700PF	50V	METAL.MYLA	
	C225	QEK51EM-106	10MF	25V	AL E.CAPAC	
	C226	QEK51EM-106	10MF	25V	AL E.CAPAC	
	C227	QETB1CM-476	47MF	16V	AL E.CAPAC	
	C228	QETB1EM-476	47MF	25V	AL E.CAPAC	
	C230	QER51CM-476	47MF	16V	AL E.CAPAC	
	C231	QETB1CM-476	47MF	16V	AL E.CAPAC	
	C232	QCZ0205-155	1.5MF	25V	C.CAPACITO	
	C233	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C234	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C235	QCBB1HK-101Y	100PF	50V	CER.CAPACI	
	C236	QCHB1EZ-223	0.022MF	25V	CER.CAPACI	
	C237	QCHB1EZ-223	0.022MF	25V	CER.CAPACI	
	C238	QETB1HM-105	1MF	50V	AL E.CAPAC	
	C239	QETB1CM-107	100MF	16V	AL E.CAPAC	
	C240	QCHB1EZ-223	0.022MF	25V	CER.CAPACI	
	C241	QCHB1EZ-223	0.022MF	25V	CER.CAPACI	
	C242	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C243	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C244	QCHB1EZ-223	0.022MF	25V	CER.CAPACI	
	C245	QCHB1EZ-223	0.022MF	25V	CER.CAPACI	
	C246	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C247	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C250	QEK51EM-475G	4.7MF	25V	AL E.CAPAC	
	C251	QETB1CM-226	22MF	16V	E.CAPACITO	
	C252	QETB1EM-106	10MF	25V	AL E.CAPAC	
	C301	QETB1HM-225	2.2MF	50V	AL E.CAPAC	
	C302	QETB1HM-225	2.2MF	50V	AL E.CAPAC	
	C303	QEK51HM-225G	2.2MF	50V	AL E.CAPAC	
	C304	QEK51HM-225G	2.2MF	50V	AL E.CAPAC	
	C305	QCBB1HK-101Y	100PF	50V	CER.CAPACI	
	C306	QCBB1HK-101Y	100PF	50V	CER.CAPACI	
	C307	QCBB1HK-181Y	180PF	50V	CER.CAPACI	
	C308	QCBB1HK-181Y	180PF	50V	CER.CAPACI	
	C309	QETB1EM-106	10MF	25V	AL E.CAPAC	
	C310	QETB1EM-106	10MF	25V	AL E.CAPAC	
	C311	QCSB1HJ-470	47PF	50V	CER.CAPACI	
	C312	QCSB1HJ-470	47PF	50V	CER.CAPACI	
	C313	QETB1CM-107	100MF	16V	AL E.CAPAC	
	C314	QETB1CM-107	100MF	16V	AL E.CAPAC	
	C315	QEK51HM-105G	1MF	50V	AL E.CAPAC	
	C316	QEK51HM-105G	1MF	50V	AL E.CAPAC	
	C317	QEK51EM-106	10MF	25V	AL E.CAPAC	
	C318	QETB1CM-107	100MF	16V	AL E.CAPAC	
	C320	QFN81HJ-682	6800PF	50V	METAL.MYLA	
	C321	QFN31HJ-332Z	3300PF	50V	MYLAR CAPA	
	C322	QFN31HJ-332Z	3300PF	50V	MYLAR CAPA	
	C323	QFN81HJ-183	0.018MF	50V	METAL.MYLA	
	C324	QFP31HG-472	4700PF	50V	POLYPROPY.	
	C325	QCBB1HK-101Y	100PF	50V	CER.CAPACI	
	C326	QCBB1HK-101Y	100PF	50V	CER.CAPACI	
	C329	QFN81HJ-103	0.01MF	50V	METAL.MYLA	
	C330	QFN81HJ-103	0.01MF	50V	METAL.MYLA	
	C331	QCBB1HK-391Y	390PF	50V	CER.CAPACI	
	C332	QCBB1HK-391Y	390PF	50V	CER.CAPACI	
	C333	QFN81HJ-273	0.027MF	50V	METAL.MYLA	
	C334	QFN81HJ-273	0.027MF	50V	METAL.MYLA	
	C337	QFN31HJ-123Z	0.012MF	50V	MYLAR CAPA	
	C338	QFN31HJ-123Z	0.012MF	50V	MYLAR CAPA	
	C341	QFN81HJ-472	4700PF	50V	MYLAR CAPA	
	C342	QFN81HJ-472	4700PF	50V	MYLAR CAPA	
	C345	QFN81HJ-473	0.047MF	50V	METAL.MYLA	
	C346	QFN81HJ-473	0.047MF	50V	METAL.MYLA	
	C347	QFN81HJ-562	5600PF	50V	METAL.MYLA	
	C348	QFN81HJ-562	5600PF	50V	METAL.MYLA	
	C349	QFN81HJ-153	0.015MF	50V	MYLAR CAPA	
	C350	QFN81HJ-153	0.015MF	50V	MYLAR CAPA	
	C353	QCY31HK-272Z	2700PF	50V	CER.CAPACI	
	C354	QCY31HK-272Z	2700PF	50V	CER.CAPACI	
	C361	QCF21HP-473A	0.047MF	50V	CER.CAPACI	
	C362	QCF21HP-473A	0.047MF	50V	CER.CAPACI	
	C364	QETB1CM-107	100MF	16V	AL E.CAPAC	
	C365	QETB1HM-225	2.2MF	50V	AL E.CAPAC	
	C366	QETB1HM-225	2.2MF	50V	AL E.CAPAC	
	C367	QFN81HJ-822	3200PF	50V	METAL.MYLA	
	C368	QFN81HJ-822	8200PF	50V	METAL.MYLA	
	C369	QETB1AM-107	100MF	10V	AL E.CAPAC	
	C370	QETB1AM-107	100MF	10V	AL E.CAPAC	
	C371	QETB1HM-225	2.2MF	50V	AL E.CAPAC	
	C372	QETB1HM-225	2.2MF	50V	AL E.CAPAC	
	C373	QETB1EM-106	10MF	25V	AL E.CAPAC	
	C374	QETB1CM-107	100MF	16V	AL E.CAPAC	
	C375	QCBB1HK-101Y	100PF	50V	CER.CAPACI	
	C376	QCBB1HK-101Y	100PF	50V	CER.CAPACI	
	C377	QCY31HK-102Z	1000PF	50V	CER.CAPACI	
	C378	QCY31HK-102Z	1000PF	50V	CER.CAPACI	
	C379	QCBB1HK-331Y	330PF	50V	CER.CAPACI	
	C380	QCBB1HK-331Y	330PF	50V	CER.CAPACI	
	C381	QETB1CM-107	100MF	16V	AL E.CAPAC	
	C383	QETB1HM-225	2.2MF	50V	AL E.CAPAC	
	C384	QETB1HM-225	2.2MF	50V	AL E.CAPAC	
	C385	QFN81HJ-822	8200PF	50V	METAL.MYLA	
	C386	QFN81HJ-822	8200PF	50V	METAL.MYLA	
	C387	QETB1AM-107	100MF	10V	AL E.CAPAC	
	C388	QETB1AM-107	100MF	10V	AL E.CAPAC	
	C389	QETB1HM-225	2.2MF	50V	AL E.CAPAC	
	C390	QETB1HM-225	2.2MF	50V	AL E.CAPAC	
	C392	QETB1CM-107	100MF	16V	AL E.CAPAC	
	C393	QCBB1HK-101Y	100PF	50V	CER.CAPACI	

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C394	QCBB1HK-101Y	100PF	50V	CER.CAPACI	
	C395	QCBB1HK-681Y	680PF	50V	CER.CAPACI	
	C396	QCBB1HK-681Y	680PF	50V	CER.CAPACI	
	C397	QCBB1HK-331Y	330PF	50V	CER.CAPACI	
	C398	QCBB1HK-331Y	330PF	50V	CER.CAPACI	

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R201	QRD161J-221	220	1/6W	CARBON RES	
	R202	QRD161J-221	220	1/6W	CARBON RES	
	R203	QRD167J-562	5.6K	1/6W	CARBON RES	
	R204	QRD167J-562	5.6K	1/6W	CARBON RES	
	R205	QRD161J-754	750K	1/6W	CARBON RES	
	R206	QRD161J-754	750K	1/6W	CARBON RES	
	R207	QRD161J-103	10K	1/6W	CARBON RES	
	R208	QRD161J-103	10K	1/6W	CARBON RES	
	R209	QRD167J-822	8.2K	1/6W	CARBON RES	
	R210	QRD167J-822	8.2K	1/6W	CARBON RES	
	R211	QRD161J-242	2.4K	1/6W	CARBON RES	
	R212	QRD161J-242	2.4K	1/6W	CARBON RES	
	R213	QRD167J-113	11K	1/6W	CARBON RES	
	R214	QRD167J-113	11K	1/6W	CARBON RES	
	R215	QRD161J-105	1M	1/6W	CARBON RES	
	R216	QRD161J-274	270K	1/6W	CARBON RES	
	R217	QRD161J-104	100K	1/6W	CARBON RES	
	R222	QRD161J-103	10K	1/6W	CARBON RES	
	R223	QRD161J-103	10K	1/6W	CARBON RES	
⚠	R224	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
	R225	QRD167J-562	5.6K	1/6W	CARBON RES	
	R226	QRD167J-562	5.6K	1/6W	CARBON RES	
	R227	QRD161J-102	1K	1/6W	CARBON RES	
	R228	QRD161J-102	1K	1/6W	CARBON RES	
	R229	QRD167J-223	22K	1/6W	CARBON RES	
	R230	QRD161J-221	220	1/6W	CARBON RES	
	R231	QRD161J-103	10K	1/6W	CARBON RES	
	R232	QRD161J-221	220	1/6W	CARBON RES	
	R233	QRD161J-105	1M	1/6W	CARBON RES	
	R234	QRD161J-221	220	1/6W	CARBON RES	
	R235	QRD161J-472	4.7K	1/6W	CARBON RES	
	R236	QRD161J-201	200	1/6W	CARBON RES	
	R237	QRD161J-271	270	1/6W	CARBON RES	
	R238	QRD161J-201	200	1/6W	CARBON RES	
	R239	QRD161J-221	220	1/6W	CARBON RES	
	R240	QRD161J-271	270	1/6W	CARBON RES	
	R241	QRD161J-391	390	1/6W	CARBON RES	
	R242	QRD161J-201	200	1/6W	CARBON RES	
	R243	QRD161J-241	240	1/6W	CARBON RES	
	R244	QRD161J-105	1M	1/6W	CARBON RES	
	R245	QRD161J-103	10K	1/6W	CARBON RES	
	R246	QRD161J-105	1M	1/6W	CARBON RES	
	R247	QRD161J-913	91K	1/6W	CARBON RES	
	R248	QRD161J-104	100K	1/6W	CARBON RES	
	R249	QRD161J-103	10K	1/6W	CARBON RES	
	R250	QRD161J-103	10K	1/6W	CARBON RES	
	R251	QRD161J-224	220K	1/6W	CARBON RES	
	R252	QRD161J-184	180K	1/6W	CARBON RES	
	R253	QRD161J-224	220K	1/6W	CARBON RES	
	R254	QRD161J-224	220K	1/6W	CARBON RES	
	R255	QRD161J-132	1.3K	1/6W	CARBON RES	
	R256	QRD161J-243	24K	1/6W	CARBON RES	
	R257	QRD161J-683	68K	1/6W	CARBON RES	
	R258	QRD161J-133Y	13K	1/6W	CARBON RES	
	R259	QRD167J-822	8.2K	1/6W	CARBON RES	
	R260	QRD167J-822	8.2K	1/6W	CARBON RES	
	R261	QRD161J-913	91K	1/6W	CARBON RES	
	R262	QRD161J-913	91K	1/6W	CARBON RES	
	R263	QRD161J-163	16K	1/6W	CARBON RES	
	R264	QRD161J-163	16K	1/6W	CARBON RES	
	R265	QRD161J-432	4.3K	1/6W	CARBON RES	
	R266	QRD161J-432	4.3K	1/6W	CARBON RES	
	R267	QRD161J-103	10K	1/6W	CARBON RES	
	R268	QRD161J-103	10K	1/6W	CARBON RES	
	R269	QRD161J-222	2.2K	1/6W	CARBON RES	
	R270	QRD161J-222	2.2K	1/6W	CARBON RES	
	R271	QRD161J-472	4.7K	1/6W	CARBON RES	
	R272	QRD161J-102	1K	1/6W	CARBON RES	
	R273	QRD161J-471	470	1/6W	CARBON RES	
	R275	QRD161J-103	10K	1/6W	CARBON RES	
⚠	R277	QRD14CJ-3R9S	3.9	1/4W	UNF.CARBON	
⚠	R278	QRD14CJ-3R9S	3.9	1/4W	UNF.CARBON	
	R280	QRD161J-221	220	1/6W	CARBON RES	
	R281	QRD161J-224	220K	1/6W	CARBON RES	
	R282	QRD161J-224	220K	1/6W	CARBON RES	
	R283	QRD161J-100	10	1/6W	CARBON RES	
	R284	QRD161J-100	10	1/6W	CARBON RES	
	R285	QRD161J-393	39K	1/6W	CARBON RES	
	R286	QRD161J-393	39K	1/6W	CARBON RES	
	R287	QRD14CJ-6R8SX	6.8	1/4W	UNF.CARBON	
⚠	R288	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
	R289	QRD161J-103	10K	1/6W	CARBON RES	
	R290	QRD167J-332	3.3K	1/6W	CARBON RES	
	R291	QRD161J-162	1.6K	1/6W	CARBON RES	
	R292	QRD161J-162	1.6K	1/6W	CARBON RES	
	R293	QRD167J-511	510	1/6W	CARBON RES	
	R294	QRD161J-561	560	1/6W	CARBON RES	
	R295	QRD167J-332	3.3K	1/6W	CARBON RES	
	R296	QRD161J-104	100K	1/6W	CARBON RES	
	R297	QRD161J-222	2.2K	1/6W	CARBON RES	

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R301	QRD161J-103	10K	1/6W	CARBON RES	
	R302	QRD161J-103	10K	1/6W	CARBON RES	
	R303	QRD167J-153	15K	1/6W	CARBON RES	
	R304	QRD167J-153	15K	1/6W	CARBON RES	
	R315	QRD161J-103	10K	1/6W	CARBON RES	
	R316	QRD161J-103	10K	1/6W	CARBON RES	
	R317	QRD161J-103	10K	1/6W	CARBON RES	
	R318	QRD161J-103	10K	1/6W	CARBON RES	
	R319	QRD161J-103	10K	1/6W	CARBON RES	
	R320	QRD161J-103	10K	1/6W	CARBON RES	
	R321	QRD161J-103	10K	1/6W	CARBON RES	
	R322	QRD161J-103	10K	1/6W	CARBON RES	
	R323	QRD167J-562	5.6K	1/6W	CARBON RES	
	R324	QRD167J-562	5.6K	1/6W	CARBON RES	
	R325	QRD167J-562	5.6K	1/6W	CARBON RES	
	R326	QRD167J-562	5.6K	1/6W	CARBON RES	
	R327	QRD161J-362	3.6K	1/6W	CARBON RES	
	R328	QRD161J-362	3.6K	1/6W	CARBON RES	
	R329	QRD161J-362	3.6K	1/6W	CARBON RES	
	R330	QRD161J-362	3.6K	1/6W	CARBON RES	
	R331	QRD161J-432	4.3K	1/6W	CARBON RES	
	R332	QRD161J-432	4.3K	1/6W	CARBON RES	
	R333	QRD161J-102	1K	1/6W	CARBON RES	
	R334	QRD161J-102	1K	1/6W	CARBON RES	
	R335	QRD161J-202	2K	1/6W	CARBON RES	
	R336	QRD161J-202	2K	1/6W	CARBON RES	
	R337	QRD161J-302	3K	1/6W	CARBON RES	
	R338	QRD161J-302	3K	1/6W	CARBON RES	
	R339	QRD167J-914	910K	1/6W	CARBON RES	
	R340	QRD167J-914	910K	1/6W	CARBON RES	
	R341	QRD161J-752	7.5K	1/6W	CARBON RES	
	R342	QRD161J-752	7.5K	1/6W	CARBON RES	
	R343	QRD167J-272	2.7K	1/6W	CARBON RES	
	R344	QRD167J-272	2.7K	1/6W	CARBON RES	
	R345	QRD161J-681	680	1/6W	CARBON RES	
	R346	QRD161J-681	680	1/6W	CARBON RES	
	R347	QRD167J-511	510	1/6W	CARBON RES	
	R348	QRD167J-511	510	1/6W	CARBON RES	
	R349	QRD161J-241	240	1/6W	CARBON RES	
	R350	QRD161J-241	240	1/6W	CARBON RES	
	R351	QRD161J-242	2.4K	1/6W	CARBON RES	
	R352	QRD161J-242	2.4K	1/6W	CARBON RES	
	R353	QRD161J-133Y	13K	1/6W	CARBON RES	
	R354	QRD161J-133Y	13K	1/6W	CARBON RES	
	R355	QRD161J-243	24K	1/6W	CARBON RES	
	R356	QRD161J-243	24K	1/6W	CARBON RES	
	R357	QRD161J-683	68K	1/6W	CARBON RES	
	R358	QRD161J-683	68K	1/6W	CARBON RES	
	R359	QRD167J-223	22K	1/6W	CARBON RES	
	R360	QRD167J-223	22K	1/6W	CARBON RES	
	R361	QRD161J-563	56K	1/6W	CARBON RES	
	R362	QRD161J-563	56K	1/6W	CARBON RES	
	R363	QRD161J-221	220	1/6W	CARBON RES	
	R364	QRD161J-221	220	1/6W	CARBON RES	
	R367	QRD167J-334	330K	1/6W	CARBON RES	
	R368	QRD167J-334	330K	1/6W	CARBON RES	
	R369	QRD161J-470	47	1/6W	CARBON RES	
	R370	QRD161J-470	47	1/6W	CARBON RES	
	R371	QRD167J-682	6.8K	1/6W	CARBON RES	
	R372	QRD167J-682	6.8K	1/6W	CARBON RES	
	R373	QRD167J-914	910K	1/6W	CARBON RES	
	R374	QRD167J-914	910K	1/6W	CARBON RES	
	R375	QRD161J-103	10K	1/6W	CARBON RES	
	R376	QRD161J-103	10K	1/6W	CARBON RES	
	R377	QRD161J-224	220K	1/6W	CARBON RES	
	R378	QRD161J-224	220K	1/6W	CARBON RES	
	R379	QRD161J-102	1K	1/6W	CARBON RES	
	R380	QRD161J-473	47K	1/6W	CARBON RES	
	R381	QRD161J-471	470	1/6W	CARBON RES	
	R382	QRD161J-471	470	1/6W	CARBON RES	
	R385	QRD167J-334	330K	1/6W	CARBON RES	
	R386	QRD167J-334	330K	1/6W	CARBON RES	
	R387	QRD161J-470	47	1/6W	CARBON RES	
	R388	QRD161J-470	47	1/6W	CARBON RES	
	R389	QRD167J-682	6.8K	1/6W	CARBON RES	
	R390	QRD167J-682	6.8K	1/6W	CARBON RES	
	R391	QRD167J-914	910K	1/6W	CARBON RES	
	R392	QRD167J-914	910K	1/6W	CARBON RES	
	R393	QRD161J-103	10K	1/6W	CARBON RES	
	R394	QRD161J-103	10K	1/6W	CARBON RES	
	R395	QRD161J-224	220K	1/6W	CARBON RES	
	R396	QRD161J-224	220K	1/6W	CARBON RES	
	R398	QRD161J-102	1K	1/6W	CARBON RES	
	RA201	QRB049J-103	10K	1/10W	RESISTOR	
	RA202	QRB089J-103	10K	1/10W	NETWORK RE	
	VR201	QVPA603-103A	10K		TRIMMER RE	
	VR301	QVPA603-201AZ	200		VARIABLE R	
	VR302	QVPA603-201AZ	200		VARIABLE R	
	VR303	QVPA603-201AZ	200		VARIABLE R	
	VR304	QVPA603-201AZ	200		VARIABLE R	
	VR305	QVPA603-104A	100K		TRIMMER RE	
	VR306	QVPA603-104A	100K		TRIMMER RE	
	VR307	QVPA603-104A	100K		TRIMMER RE	
	VR308	QVPA603-104A	100K		TRIMMER RE	
	VR309	QVPA603-104A	100K		TRIMMER RE	
	VR310	QVPA603-104A	100K		TRIMMER RE	
	VR311	QVPA603-503A	50K		VARIABLE R	
	VR312	QVPA603-503A	50K		VARIABLE R	

OTHERS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10512-002	PRINTED BOA	
	J303	VMC0314-S08	CONNECT TER	
	J304	VMC0314-S16	CONNECT TER	
	L211	EQL2106-223	INDUCTOR	
	L212	EQL2106-223	INDUCTOR	
	L301	ENZ6002-012	OSCILLATOR	
	L303	EQL2106-562	INDUCTOR	
	L304	EQL2106-562	INDUCTOR	
	L305	EQL2106-223	INDUCTOR	
	L306	EQL2106-223	INDUCTOR	
	P201	VMC0234-P11	CONNECT TER	
	P202	VMC0234-P14	CONNECT TER	
	P203	VMC0234-P08	CONNECT TER	
	P204	VMC0234-P08	CONNECT TER	
	P292	EMV5142-909	CONNECT TER	
	P293	EMV5142-908	CONNECT TER	
	P303	EMV5132-003R	CONNECT TER	
	P304	EMV5132-016R	CONNECT TER	
	P331	EMV7155-106R	CONNECT TER	
	P333	EMV7155-106R	CONNECT TER	
	FS200	E3400-431	FELT SPACER	
	JA221	VMC0163-R16	CONNECT TER	
	JW200	QWE350-06BB	VINYL WIRE	
	TW301	QWE350-09RR	VINYL WIRE	
	XT201	ECX0004-194KM	CERAMIC RES	

-MEMO-

XT-C770

< PARTS LIST >

Note : All printed circuit boards and its assemblies are not available as service parts.

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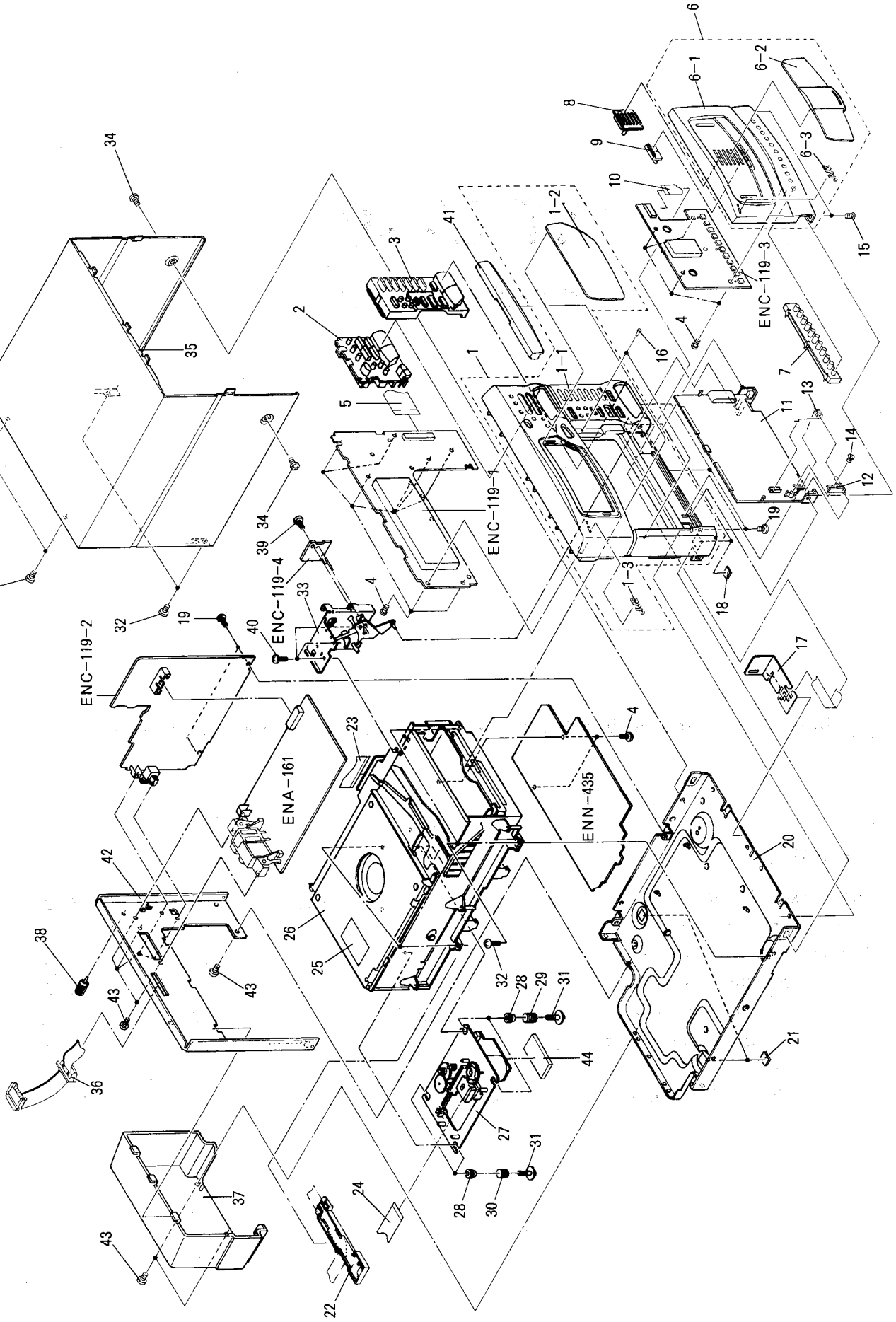
General Exploded View and Parts List

Symbol No. M 3 M M



■ PARTS LIST

Symbol No. M 3 M M

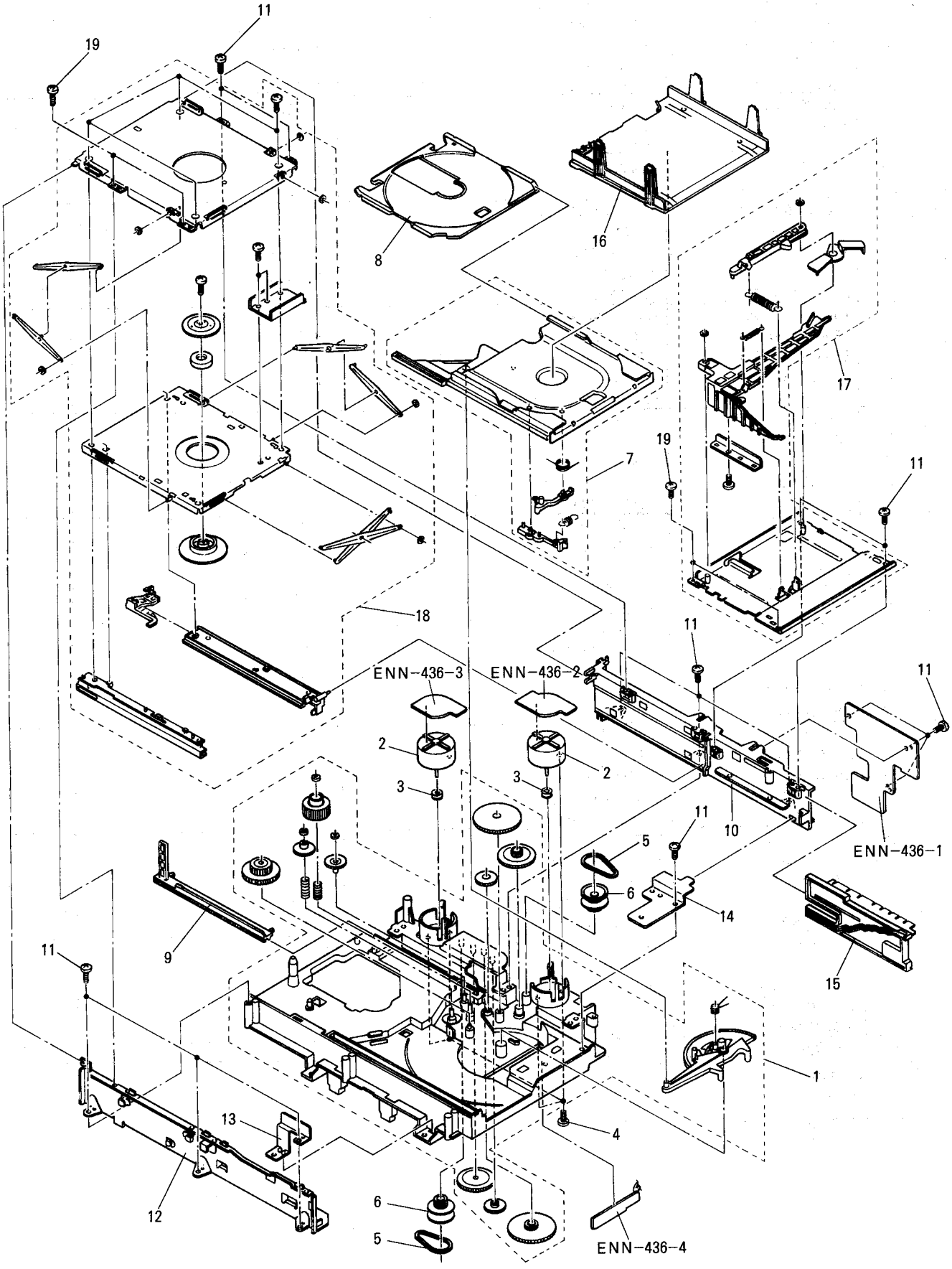
⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	EFP-XTC770J(S)	FRONT PANEL ASS'Y	1		
	1-1	E102967-003SM	FRONT PANEL	1		
	1-2	E208394-001SM	WINDOW SCREEN	1	TUNER	
	1-3	E406971-221	JVC MARK	1		
	2	E208396-002SM	PUSH BUTTON	1	TUNER	
	3	E208398-002SM	PUSH BUTTON	1	CD	
	4	SDSF2608Z	SCREW	14		
	5	VWF1222-12TTBX	FFC CABLE	1	FC201	
	6	E102969-002SA	SUB PANEL ASSY	1		
	6-1	E102969-002SM	SUB PANEL	1		
	6-2	E208400-001SM	WINDOW SCREEN	1	CD	
	6-3	E406971-221	JVC MARK	1		
	7	E208407-001SM	PUSH BUTTON	1	10KEY	
	8	E309288-001SM	INDICATOR	1	6 DISC	
	9	E309271-001SM	INDICATOR	1	PLUS 1	
	10	VWF1015-28002Z	FLAT WIRE ASSY	1	FC202	
	11	E208402-002SM	BACK PANEL	1		
	12	E309272-001SM	DOOR HINGE	1		
	13	E408501-001SM	SPRING	1		
	14	SDSF2606Z	SCREW	1		
	15	SSSF2606M	TAPPING SCREW	2		
	16	E69897-002	RUBBER CUSHION	2		
	17	E309377-001SM	CABLE HOLDER	1		
	18	E75896-001	SPACER	2	FRONT FOOT	
	19	SBSG3008CC	TAPPING SCREW	5		
	20	E102971-001SM	CHASSIS BASE	1		
	21	E75896-006	FELT SPACER	2	REAR FOOT	
	22	E308181-001	FFC HOLDER	1		
	23	VWF1234-16TTB	FFC CABLE	1	FC204	
	24	VWF1015-16PPA	FFC CABLE	1	FC203	
	25	E406507-001	CAUTION LABEL	1		C
	26	----------	CHANGER MECHA	1	SEE PAGE 5-4	
	27	----------	CD MECHA	1	SEE PAGE 5-6	
	28	E407153-001	INSULATOR	4		
	29	E408373-001	SPRING	2		
	30	E408373-002	SPRING	2		
	31	E408361-001	SCREW	4		
	32	GBSG3008CC	TAPPING SCREW	8		
	33	E309186-001SM	DOOR MECHA ASSY	1		
	34	SDSG3006M	TAPPING SCREW	2		
	35	E207787-011	METAL COVER	1		
	36	EWP902-047	FLAT WIRE ASSY	1		
	37	E208406-001SM	REAR COVER	1		
	38	E408091-001	GND TERMINAL	1		
	39	SDST3006Z	TAPPING SCREW	1		
	40	SBSF3008Z	TAPPING SCREW	3		
	41	E208403-001SM	CD FITTING	1		
	42	E208404-013SM	REAR PANEL	1		J
		E208404-014SM	REAR PANEL	1		C
	43	E73273-003	SPECIAL SCREW	7		
	44	E306805-163	SPACER	1		

The Marks for Designated Areas

J ..... the U.S.A. C ..... Canada

No mark indicates all area.

CD Changer Mechanism Ass'y and Parts List Symbol No. M 4 M M



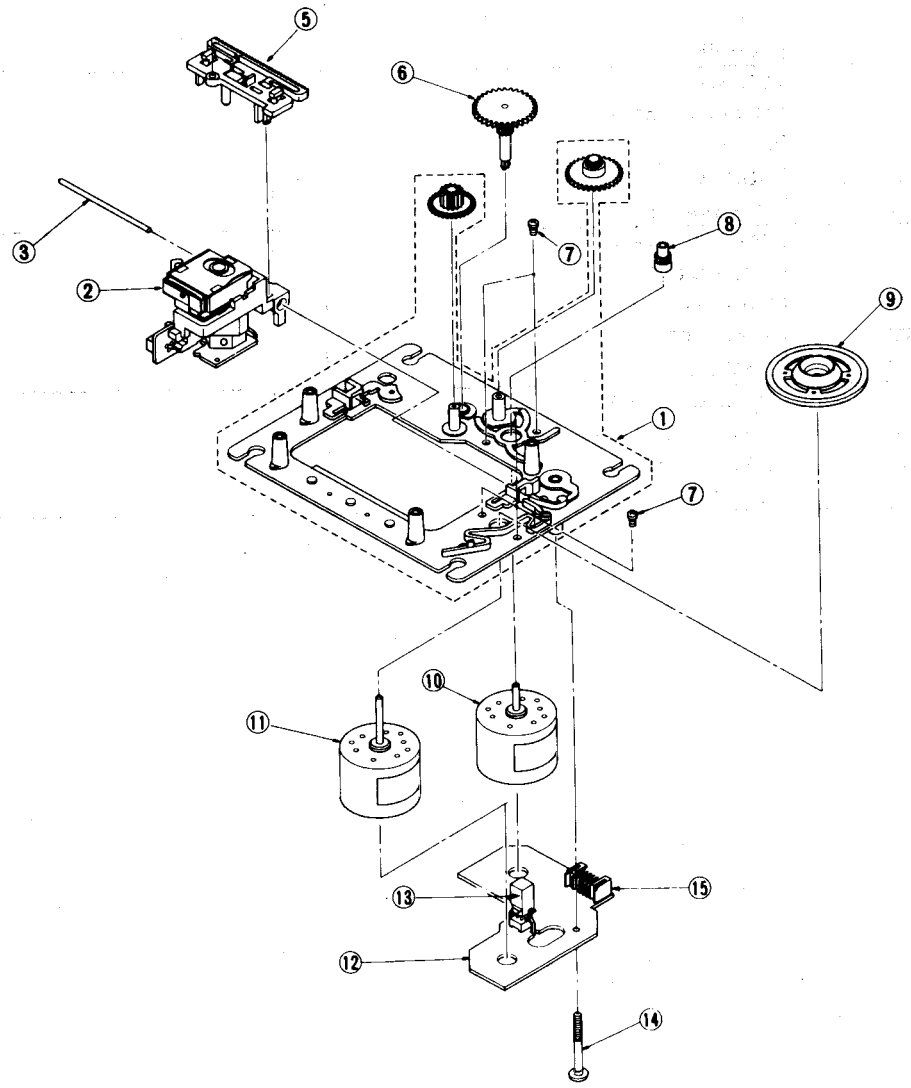
■ Parts List (CD Changer Mechanism Ass'y)

Symbol No. M 4 M M

⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	E208436-001SM	MECHA BASE ASSY	1		
	2	RF-500TB-14415	DC MOTOR	2		
	3	E75984-222SS	MOTOR PULLEY	2		
	4	SPSP2604Z	SCREW	4		
	5	E75950-002	REEL BELT	2		
	6	E75985-222SS	GEAR(1)	2		
	7	E208456-001SM	TRAY BASE ASSY	1		
	8	E26554-004	CD TRAY	1		
	9	E309148-002SM	HOOK GUIDE	1		
	10	E102925-001SM	SIDE BRACKET	1		
	11	SBSF2608Z	TAPPING SCREW	14		
	12	E208305-001SM	SIDE BRACKET	1		
	13	E408514-001SM	EARTH PLATE	1		
	14	E408517-001SM	BRACKET PLATE	1		
	15	E208303-001SM	ELEVATOR CAM	1		
	16	E208302-002SM	MAGAZIN GUIDE	1		
	17	E208458-002SM	SAFETY LEVER ASSY	1		
	18	E102922-001SM	ELEVATOR ASSY	1		
	19	SDST2606Z	TAPPING SCREW	4		

CD Mechanism Ass'y and Parts List

Symbol No. M 5 M M



Symbol No. M 5 M M

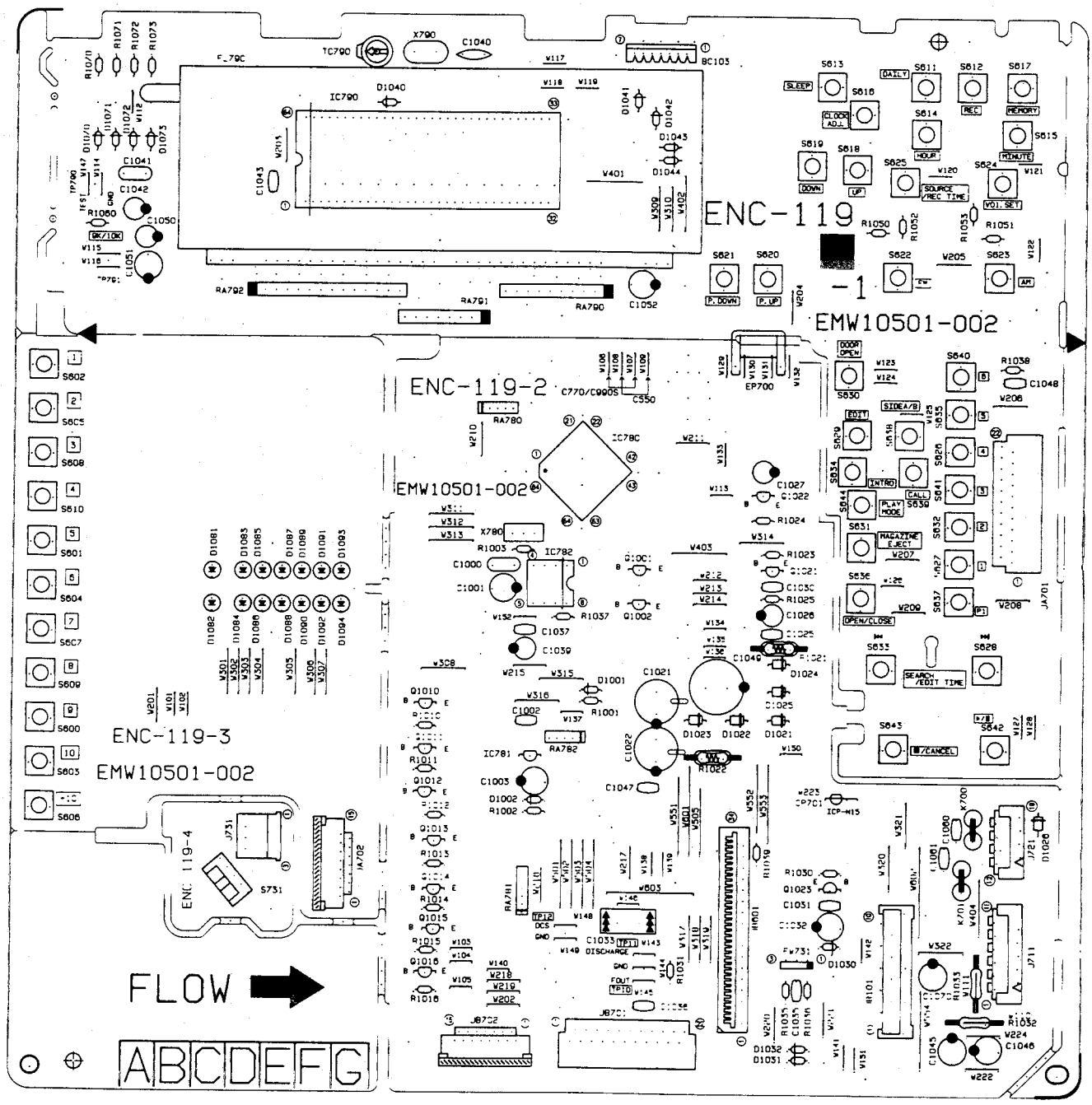
■ PARTS LIST(CD Mechanism)

⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	E102501-221SS	MECHA BASE	1		
	2	OPTIMA-6S	OPTICAL PICK-UP	1		
	3	E407782-001	CD SHAFT	1		
	4	SDSF2006Z	SCREW	1		
	5	E307746-001	CD RACK	1		
	6	E307745-221SS	CAM GEAR	1		
	7	SDSP2003N	SCREW	4		
	8	E406750-221SS	PINION GEAR	1		
	9	EPB309173A	TURNTABLE	1		
	10	MDN-4RA3ETA-1	FEED MOTOR	1		
	11	E406783-001	DC MOTOR	1		
	12	EMW10190-001(S)	PRINTED BOARD	1		
	13	EBS1100-005	LEAF SWITCH	1		
	14	E75832-001	SPECIAL SCREW	1		
	15	EMV5109-006B	CONNECT TERMINAL	1		

Printed Circuit Board Ass'y and Parts List

■ ENC-119 □ Display & KEY Matrix PC Board Ass'y

Note : ENC-119 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Version	Designated Areas
ENN-119 [E]	C	Canada
ENN-119 [D]	J	the U.S.A.

TRANSISTORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q1001	DTA114YS	DIGITAL TRA ROHM	
	Q1002	DTC114YS	DIGITAL TRA ROHM	
	Q1010	DTC114YS	DIGITAL TRA ROHM	C
	Q1010	DTC114YS	DIGITAL TRA ROHM	J
	Q1011	DTC114YS	DIGITAL TRA ROHM	C
	Q1011	DTC114YS	DIGITAL TRA ROHM	J
	Q1012	DTC114YS	DIGITAL TRA ROHM	C
	Q1012	DTC114YS	DIGITAL TRA ROHM	J
	Q1013	DTC114YS	DIGITAL TRA ROHM	C
	Q1013	DTC114YS	DIGITAL TRA ROHM	J
	Q1014	DTC114YS	DIGITAL TRA ROHM	C
	Q1014	DTC114YS	DIGITAL TRA ROHM	J
	Q1015	DTC114YS	DIGITAL TRA ROHM	C
	Q1015	DTC114YS	DIGITAL TRA ROHM	J
	Q1016	DTC114YS	DIGITAL TRA ROHM	C
	Q1016	DTC114YS	DIGITAL TRA ROHM	J
	Q1021	2SA934(Q,R)	SI.TRANSIST ROHM	
	Q1022	DTA144ES	DIGITAL TRA ROHM	
	Q1023	2SC2060(Q,R)	SI.TRANSIST ROHM	

I. C. S.

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC780	MN172412J5N2	I.C(MICRO-C MATSUSHITA	C
	IC780	MN172412J5N2	I.C(MICRO-C MATSUSHITA	J
	IC781	MN1281(P/Q)	I.C(DIGI-MO MATSUSHITA	
	IC782	AT24C01A-10PC	I.C(EP-ROM) MITSUBISHI	
	IC790	MN171602J5R	I.C(MICRO-C MATSUSHITA	

DIODES

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D1001	1SS119	SI.DIODE		
	D1002	1SS119	SI.DIODE		
	D1021	1SR139-200	SI.DIODE	ROHM	
	D1022	1SR139-200	SI.DIODE	ROHM	
	D1023	1SR139-200	SI.DIODE	ROHM	
	D1024	1SR139-200	SI.DIODE	ROHM	
	D1025	1SR139-200	SI.DIODE	ROHM	
	D1026	1SR139-200	SI.DIODE	ROHM	
	D1030	MTZ7.5JC	ZENER DIODE	ROHM	
	D1031	1SS119	SI.DIODE		
	D1032	1SS119	SI.DIODE		
	D1040	1SS119	SI.DIODE		
	D1041	1SS119	SI.DIODE		
	D1042	1SS119	SI.DIODE		
	D1043	1SS119	SI.DIODE		
	D1044	1SS119	SI.DIODE		
	D1070	1SS119	SI.DIODE		
	D1071	1SS119	SI.DIODE		C
	D1071	1SS119	SI.DIODE		J
	D1072	1SS119	SI.DIODE		C
	D1072	1SS119	SI.DIODE		J
	D1073	1SS119	SI.DIODE		C
	D1073	1SS119	SI.DIODE		J
	D1081	SLR-342VC3F	L.E.D.	ROHM	C
	D1081	SLR-342VC3F	L.E.D.	ROHM	J
	D1082	SLR-342VC3F	L.E.D.	ROHM	C
	D1082	SLR-342VC3F	L.E.D.	ROHM	J
	D1083	SLR-342PCT31	L.E.D.	ROHM	C
	D1083	SLR-342PCT31	L.E.D.	ROHM	J
	D1084	SLR-342PCT31	L.E.D.	ROHM	C
	D1084	SLR-342PCT31	L.E.D.	ROHM	J
	D1085	SLR-342PCT31	L.E.D.	ROHM	C
	D1085	SLR-342PCT31	L.E.D.	ROHM	J
	D1086	SLR-342PCT31	L.E.D.	ROHM	C
	D1086	SLR-342PCT31	L.E.D.	ROHM	J
	D1087	SLR-342PCT31	L.E.D.	ROHM	C
	D1087	SLR-342PCT31	L.E.D.	ROHM	J
	D1088	SLR-342PCT31	L.E.D.	ROHM	C
	D1088	SLR-342PCT31	L.E.D.	ROHM	J
	D1089	SLR-342PCT31	L.E.D.	ROHM	C
	D1089	SLR-342PCT31	L.E.D.	ROHM	J
	D1090	SLR-342PCT31	L.E.D.	ROHM	C
	D1090	SLR-342PCT31	L.E.D.	ROHM	J
	D1091	SLR-342PCT31	L.E.D.	ROHM	C
	D1091	SLR-342PCT31	L.E.D.	ROHM	J
	D1092	SLR-342PCT31	L.E.D.	ROHM	C
	D1092	SLR-342PCT31	L.E.D.	ROHM	J
	D1093	SLR-342PCT31	L.E.D.	ROHM	C
	D1093	SLR-342PCT31	L.E.D.	ROHM	J
	D1094	SLR-342PCT31	L.E.D.	ROHM	C
	D1094	SLR-342PCT31	L.E.D.	ROHM	J

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C1	QCZ0205-155	1.5MF	25V	C.CAPACITO	
	C1001	QETB0JM-107	100MF	6.3V	AL E.CAPAC	
	C1002	QCHB1EZ-223	0.022MF	25V	CER.CAPACI	
	C1003	QETB0JM-107	100MF	6.3V	AL E.CAPAC	
	C1021	QETB1CM-108	1000MF	16V	AL E.CAPAC	
	C1022	QETB1CM-108	1000MF	16V	AL E.CAPAC	
	C1025	QCHB1EZ-223	0.022MF	25V	CER.CAPACI	
	C1030	QCHB1EZ-223	0.022MF	25V	CER.CAPACI	
	C1031	QCHB1EZ-223	0.022MF	25V	CER.CAPACI	
	C1032	QETB1CM-107	100MF	16V	AL E.CAPAC	
	C1033	QEAD0HZ-10AZM			AL E.CAPAC	
	C1035	QCHB1EZ-223	0.022MF	25V	CER.CAPACI	
	C1036	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C1037	QCHB1EZ-223	0.022MF	25V	CER.CAPACI	
	C1039	QETB1HM-225	2.2MF	50V	AL E.CAPAC	
	C1040	QCT26CH-330	33PF	50V	CER.CAPACI	
	C1041	QCZ0205-155	1.5MF	25V	C.CAPACITO	
	C1042	QETB1CM-226	22MF	16V	E.CAPACITO	
	C1043	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C1045	QETB1HM-476	47MF	50V	E.CAPACITO	
	C1046	QETB1HM-476	47MF	50V	E.CAPACITO	
	C1047	QCVB1CM-103Y	0.01MF	16V	CER.CAPACI	
	C1050	QETB1HM-106	10MF	50V	E.CAPACITO	
	C1051	QETB1HM-475E	4.7MF	50V	E.CAPACITO	
	TC790	ENZ1003-015	0.1MF		TRIMMER CA	

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	RA780	QRB049J-472	4.7K	1/10W	NETWORK RE	
	RA781	QRB059J-472	4.7K	1/10W	NETWORK RE	
	RA782	QRB049J-472	4.7K	1/10W	NETWORK RE	
	R1001	QRD161J-103	10K	1/6W	CARBON RES	
	R1002	QRD161J-821	820	1/6W	CARBON RES	
	R1010	QRD167J-152	1.5K	1/6W	CARBON RES	C
	R1010	QRD167J-152	1.5K	1/6W	CARBON RES	J
	R1011	QRD161J-391	390	1/6W	CARBON RES	C
	R1011	QRD161J-391	390	1/6W	CARBON RES	J
	R1012	QRD161J-391	390	1/6W	CARBON RES	C
	R1012	QRD161J-391	390	1/6W	CARBON RES	J
	R1013	QRD161J-391	390	1/6W	CARBON RES	C
	R1013	QRD161J-391	390	1/6W	CARBON RES	J
	R1014	QRD161J-391	390	1/6W	CARBON RES	C
	R1014	QRD161J-391	390	1/6W	CARBON RES	J
	R1015	QRD161J-391	390	1/6W	CARBON RES	C
	R1015	QRD161J-391	390	1/6W	CARBON RES	J
	R1016	QRD161J-391	390	1/6W	CARBON RES	C
	R1016	QRD161J-391	390	1/6W	CARBON RES	J
⚠	R1021	PTH61G30BD2R2N			FUSIBLE RE	C
⚠	R1021	QRD12CJ-2R2SX	2.2	1/2W	CARBON RES	J
⚠	R1022	PTH61G30BD2R2N			FUSIBLE RE	C
⚠	R1022	QRD12CJ-2R2SX	2.2	1/2W	CARBON RES	J
	R1023	QRD161J-472	4.7K	1/6W	CARBON RES	
	R1024	QRD161J-331	330	1/6W	CARBON RES	
	R1025	QRD161J-472	4.7K	1/6W	CARBON RES	
	R1030	QRD161J-472	4.7K	1/6W	CARBON RES	
	R1031	QRD161J-470	47	1/6W	CARBON RES	
⚠	R1032	QRD14CJ-1R5SX	1.5	1/4W	UNF.CARBON	C
⚠	R1032	QRD14CJ-1R5SX	1.5	1/4W	UNF.CARBON	J
⚠	R1033	QRD14CJ-1R5SX	1.5	1/4W	UNF.CARBON	C
⚠	R1033	QRD14CJ-1R5SX	1.5	1/4W	UNF.CARBON	J
	R1035	QRD161J-221	220	1/6W	CARBON RES	
	R1036	QRD161J-221	220	1/6W	CARBON RES	
	R1037	QRD161J-103	10K	1/6W	CARBON RES	
	R1038	QRD167J-223	22K	1/6W	CARBON RES	
	R1039	QRD161J-221	220	1/6W	CARBON RES	
	R1050	QRD167J-223	22K	1/6W	CARBON RES	
	R1051	QRD167J-223	22K	1/6W	CARBON RES	
	R1052	QRD167J-223	22K	1/6W	CARBON RES	
	R1053	QRD167J-223	22K	1/6W	CARBON RES	
	R1060	QRD161J-103	10K	1/6W	CARBON RES	
	R1070	QRD161J-104	100K	1/6W	CARBON RES	
	R1071	QRD161J-104	100K	1/6W	CARBON RES	
	R1072	QRD161J-104	100K	1/6W	CARBON RES	
	R1073	QRD161J-104	100K	1/6W	CARBON RES	

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
		EMW10501-002	PRINTED BOA		
		E309289-001SM	L.E.D.HOLDE		C
		E309289-001SM	L.E.D.HOLDE		J
	J711	EMV7141-011M	FLAT WIRE A		
	J721	EMV7141-008M	CONNECT TER		
	J731	VMC0107-R03	CONNECT TER		
	S600	ESP0001-023M	TACT SWITCH	9	C
	S600	ESP0001-023M	TACT SWITCH	9	J
	S601	ESP0001-023M	TACT SWITCH	5	C
	S601	ESP0001-023M	TACT SWITCH	5	J
	S602	ESP0001-023M	TACT SWITCH	1	C
	S602	ESP0001-023M	TACT SWITCH	1	J
	S603	ESP0001-023M	TACT SWITCH	10	C
	S603	ESP0001-023M	TACT SWITCH	10	J
	S604	ESP0001-023M	TACT SWITCH	6	C
	S604	ESP0001-023M	TACT SWITCH	6	J
	S605	ESP0001-023M	TACT SWITCH	2	C
	S605	ESP0001-023M	TACT SWITCH	2	J
	S606	ESP0001-023M	TACT SWITCH	+10	C
	S606	ESP0001-023M	TACT SWITCH	+10	J
	S607	ESP0001-023M	TACT SWITCH	7	C
	S607	ESP0001-023M	TACT SWITCH	7	J
	S608	ESP0001-023M	TACT SWITCH	3	C
	S608	ESP0001-023M	TACT SWITCH	3	J
	S609	ESP0001-023M	TACT SWITCH	8	C
	S609	ESP0001-023M	TACT SWITCH	8	J
	S610	ESP0001-023M	TACT SWITCH	4	C
	S610	ESP0001-023M	TACT SWITCH	4	J
	S611	ESP0001-023M	TACT SWITCH	DAILY	
	S612	ESP0001-023M	TACT SWITCH	REC	
	S613	ESP0001-023M	TACT SWITCH	SLEEP	
	S614	ESP0001-023M	TACT SWITCH	HOUR	
	S615	ESP0001-023M	TACT SWITCH	MINUTE	
	S616	ESP0001-023M	TACT SWITCH	CLOCK ADJUST	
	S617	ESP0001-023M	TACT SWITCH	MEMORY	
	S618	ESP0001-023M	TACT SWITCH	UP	
	S619	ESP0001-023M	TACT SWITCH	DOWN	
	S620	ESP0001-023M	TACT SWITCH	PRESET UP	
	S621	ESP0001-023M	TACT SWITCH	PRESET DOWN	
	S622	ESP0001-023M	TACT SWITCH	FM	
	S623	ESP0001-023M	TACT SWITCH	AM	
	S624	ESP0001-023M	TACT SWITCH	VOLUME POSITION	
	S625	ESP0001-023M	TACT SWITCH	SOURCE/REC TIME	
	S626	ESP0001-023M	TACT SWITCH	D4	
	S627	ESP0001-023M	TACT SWITCH	D1	

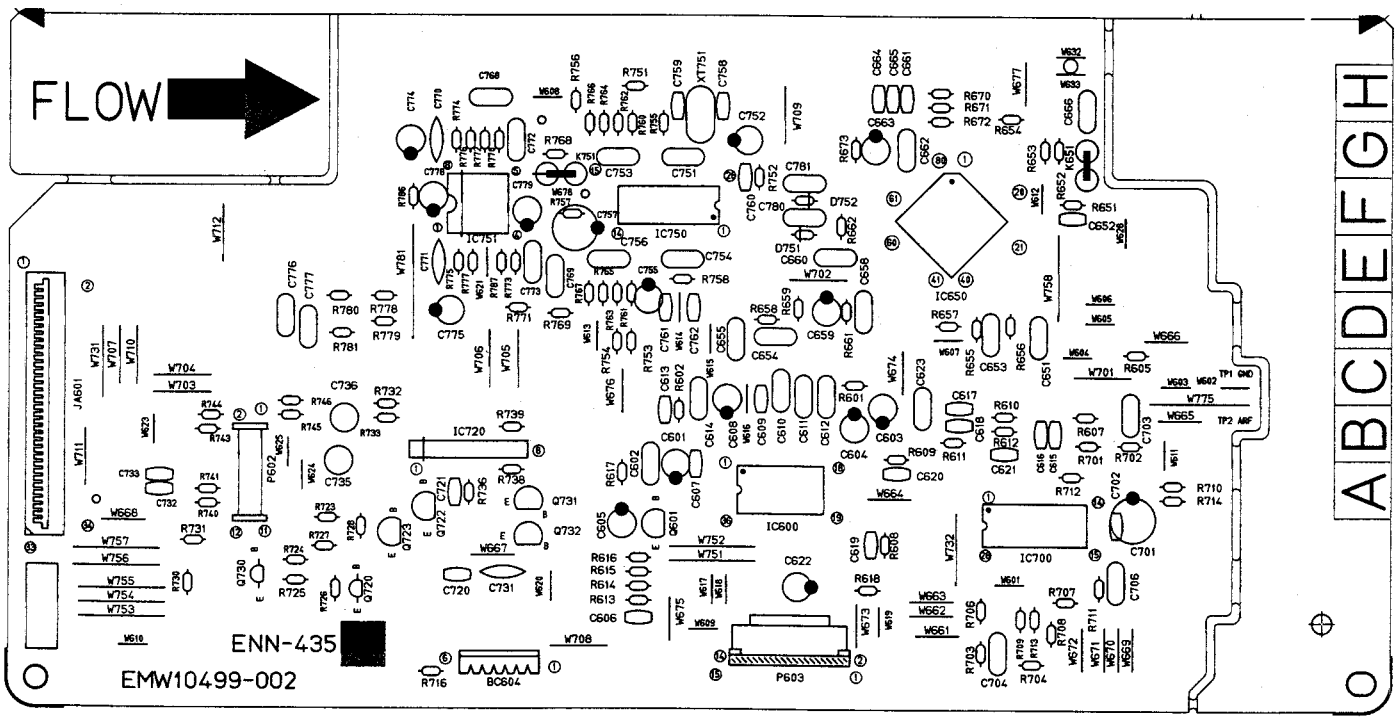
OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	S628	ESP0001-023M	TACT SWITCH ⏭	
	S629	ESP0001-023M	TACT SWITCH EDIT	
	S630	ESP0001-023M	TACT SWITCH DOOR O/C	
	S631	ESP0001-023M	TACT SWITCH MAG.EJECT	
	S632	ESP0001-023M	TACT SWITCH D2	
	S633	ESP0001-023M	TACT SWITCH ⏮	
	S634	ESP0001-023M	TACT SWITCH INTRO	
	S635	ESP0001-023M	TACT SWITCH D5	
	S636	ESP0001-023M	TACT SWITCH P1 O/C	
	S637	ESP0001-023M	TACT SWITCH P1	
	S638	ESP0001-023M	TACT SWITCH SIDE A/B	
	S639	ESP0001-023M	TACT SWITCH CALL	
	S640	ESP0001-023M	TACT SWITCH D6	
	S641	ESP0001-023M	TACT SWITCH D3	
	S642	ESP0001-023M	TACT SWITCH ▶ / ⏸	
	S643	ESP0001-023M	TACT SWITCH ■ / CANCEL	
	S644	ESP0001-023M	TACT SWITCH P.MODE	
	S731	ESS1200-002	LEVER SWITC	
	X780	ECXP6R0-001ZA	CRYSTAL	
	X790	ECX0006-000KNJ	CRYSTAL	

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	BC103	EWS267-A415J	SOCKET WIRE	
	BK790	E309287-002SM	FL HOLDER	
⚠	CP701	ICP-N15	I.C.PROTECT	C
	EP700	E70225-001	EARTH PLATE	
	FL790	ELU0001-199	FLUORESCENT	
	FS790	E306805-014	FELT SPACER	
	FW731	EWR33D-16LS	FLAT WIRE A	
	F1080	E3400-431	FELT SPACER	
	JA701	VMC0163-R22	CONNECT TER	C
	JA701	VMC0163-R22	CONNECT TER	J
	JA702	EMV7144-015R	CONNECT TER	C
	JA702	EMV7144-015R	CONNECT TER	J
	JB101	EMV5140-010	VOLUME SOCK	
	JB601	VMC0163-034	CONNECT TER	C
	JB601	VMC0163-034	CONNECT TER	J
	JB701	VMC0163-R22	CONNECT TER	C
	JB701	VMC0163-R22	CONNECT TER	J
	JB702	EMV7144-015R	CONNECT TER	C
	JB702	EMV7144-015R	CONNECT TER	J

■ ENN-435 [C] CD PC Board Ass'y



TRANSISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q601	2SA950(O,Y)	SI.TRANSIST TOSHIBA	
	Q720	DTC144ES	DIGITAL TRA ROHM	
	Q722	2SC2060(Q,R)	SI.TRANSIST ROHM	
	Q723	2SA934(Q,R)	SI.TRANSIST ROHM	
	Q730	DTC144ES	DIGITAL TRA ROHM	
	Q731	2SC2060(Q,R)	SI.TRANSIST ROHM	
	Q732	2SA934(Q,R)	SI.TRANSIST ROHM	

I. C. S.

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC600	AN8806SB	I.C(M) MATSUSHITA	
	IC650	MN662720RB	I.C(DIGI-MO MATSUSHITA	
	IC700	BA6398FP	I.C(MONO-AN ROHM	
	IC720	VC4580L	I.C(MONO-AN DAINICHI	
	IC750	MN35503	I.C(DIGI-MO MATSUSHITA	
	IC751	NJM4580DD	I.C(MONO-AN DAINICHI	

DIODES

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D751	1SS119	SI.DIODE	
	D752	1SS119	SI.DIODE	

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C601	QETB1AM-107	100MF 10V AL E.CAPAC	
	C602	QCZ0202-155	1.5MF 25V CER.RESIST	
	C604	QETB1AM-107	100MF 10V AL E.CAPAC	
	C605	QER51VM-106	10MF 35V AL E.CAPAC	
	C606	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C607	QCSB1HJ-680	68PF 50V CER.CAPACI	
	C608	QETB1HM-105	1MF 50V AL E.CAPAC	
	C609	QCBB1HK-101Y	100PF 50V CER.CAPACI	
	C610	QFLB1HJ-273	0.027MF 50V MYLAR CAPA	
	C611	QFLB1HJ-472	4700PF 50V MYLAR CAPA	
	C612	QFLB1HJ-332	3300PF 50V MYLAR CAPA	
	C613	QCT30CH-3R3Y	3.3PF 50V CER.CAPACI	
	C614	QFV81HJ-104	0.1MF 50V THIN FILM	
	C615	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C616	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C617	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C618	QCXB1CM-222Y	2200PF 16V CER.CAPACI	
	C619	QCBB1HK-271Y	270PF 50V CER.CAPACI	
	C620	QCSB1HJ-470	47PF 50V CER.CAPACI	
	C621	QCBB1HK-821Y	820PF 50V CER.CAPACI	

CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C622	QETB1AM-476	47MF 10V E.CAPACITO	
	C623	QFV81HJ-104	0.1MF 50V THIN FILM	
	C651	QFLB1HJ-471	470PF 50V MYLAR CAPA	
	C652	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C653	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C654	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C655	QFV81HJ-334	0.33MF 50V TF.CAPACIT	
	C658	QFV81HJ-104	0.1MF 50V THIN FILM	
	C659	QETB1AM-107	100MF 10V AL E.CAPAC	
	C660	QFLB1HJ-223	0.022MF 50V MYLAR CAPA	
	C662	QFV81HJ-104	0.1MF 50V THIN FILM	
	C663	QETB1AM-107	100MF 10V AL E.CAPAC	
	C701	QETB1CM-227	220MF 16V AL E.CAPAC	
	C702	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C703	QFLB1HJ-273	0.027MF 50V MYLAR CAPA	
	C704	QFLB1HJ-183	0.018MF 50V MYLAR CAPA	
	C706	QFLB1HJ-273	0.027MF 50V MYLAR CAPA	
	C720	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C721	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C722	QCS21HJ-101A	100PF 50V CER.CAPACI	C
	C722	QCS21HJ-101A	100PF 50V CER.CAPACI	J
	C731	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C732	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C733	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C735	QETC1HM-225ZN	2.2MF 50V AL E.CAPAC	
	C736	QETC1HM-225ZN	2.2MF 50V AL E.CAPAC	
	C751	QCZ0202-155	1.5MF 25V CER.RESIST	
	C752	QETB1AM-476	47MF 10V E.CAPACITO	
	C753	QCZ0202-155	1.5MF 25V CER.RESIST	
	C754	QCZ0202-155	1.5MF 25V CER.RESIST	
	C755	QETB0JM-227	220MF 6.3V E.CAPACITO	
	C756	QCZ0202-155	1.5MF 25V CER.RESIST	
	C757	EETB0JM-477E	470MF 6.3V E.CAPACITO	
	C758	QCT30CH-180Y	18PF 50V CER.CAPACI	
	C759	QCT30CH-180Y	18PF 50V CER.CAPACI	
	C768	QFLB1HJ-182	1800PF 50V MYLAR CAPA	
	C769	QFLB1HJ-182	1800PF 50V MYLAR CAPA	
	C770	QCS21HJ-101A	100PF 50V CER.CAPACI	
	C771	QCS21HJ-101A	100PF 50V CER.CAPACI	
	C772	QFLB1HJ-333	0.033MF 50V MYLAR CAPA	
	C773	QFLB1HJ-333	0.033MF 50V MYLAR CAPA	
	C774	EEZ2505-476	47MF AL E.CAPAC	
	C775	EEZ2505-476	47MF AL E.CAPAC	
	C776	QFLB1HJ-682	6800PF 50V MYLAR CAPA	
	C777	QFLB1HJ-682	6800PF 50V MYLAR CAPA	
	C778	EEZ2505-476	47MF AL E.CAPAC	
	C779	EEZ2505-476	47MF AL E.CAPAC	
	C780	QCZ0202-155	1.5MF 25V CER.RESIST	
	C781	QCZ0202-155	1.5MF 25V CER.RESIST	

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R602	QRD161J-123	12K 1/6W CARBON RES	
	R605	QRD167J-134	130K 1/6W CARBON RES	
	R607	QRD161J-913	91K 1/6W CARBON RES	
	R608	QRD161J-273	27K 1/6W CARBON RES	
	R609	QRD161J-114	110K 1/6W CARBON RES	
	R610	QRD167J-154	150K 1/6W CARBON RES	
	R611	QRD161J-394	390K 1/6W CARBON RES	
	R612	QRD161J-103	10K 1/6W CARBON RES	
	R613	QRD167J-121	120 1/6W CARBON RES	
	R614	QRD161J-470	47 1/6W CARBON RES	
	R615	QRD161J-470	47 1/6W CARBON RES	
	R616	QRD161J-470	47 1/6W CARBON RES	
	R617	QRD161J-2R2	2.2 1/6W CARBON RES	
	R618	QRD161J-910Y	91 1/6W CARBON RES	
	R651	QRD161J-102	1K 1/6W CARBON RES	
	R652	QRD161J-102	1K 1/6W CARBON RES	
	R653	QRD161J-102	1K 1/6W CARBON RES	
	R654	QRD161J-470	47 1/6W CARBON RES	
	R655	QRD167J-155	1.5M 1/6W CARBON RES	
	R656	QRD161J-104	100K 1/6W CARBON RES	
	R657	QRD161J-104	100K 1/6W CARBON RES	
	R658	QRD161J-681	680 1/6W CARBON RES	
	R659	QRD161J-124	120K 1/6W CARBON RES	
	R661	QRD161J-2R2	2.2 1/6W CARBON RES	
	R662	QRD161J-2R2	2.2 1/6W CARBON RES	
	R670	QRD161J-102	1K 1/6W CARBON RES	
	R671	QRD161J-102	1K 1/6W CARBON RES	
	R672	QRD161J-102	1K 1/6W CARBON RES	
	R673	QRD161J-472	4.7K 1/6W CARBON RES	
	R701	QRD161J-821	820 1/6W CARBON RES	
	R702	QRD167J-562	5.6K 1/6W CARBON RES	
	R703	QRD161J-112	1.1K 1/6W CARBON RES	
	R704	QRD167J-113	11K 1/6W CARBON RES	
	R706	QRD161J-124	120K 1/6W CARBON RES	
	R707	QRD167J-332	3.3K 1/6W CARBON RES	
	R708	QRD161J-752	7.5K 1/6W CARBON RES	
	R709	QRD167J-223	22K 1/6W CARBON RES	
	R710	QRD161J-392	3.9K 1/6W CARBON RES	
	R711	QRD167J-153	15K 1/6W CARBON RES	
	R712	QRD161J-752	7.5K 1/6W CARBON RES	
	R713	QRD167J-751	750 1/6W CARBON RES	
	R714	QRD161J-363	36K 1/6W CARBON RES	
	R716	QRD167J-151	150 1/6W CARBON RES	
	R723	QRD161J-243	24K 1/6W CARBON RES	
	R724	QRD161J-303Y	30K 1/6W CARBON RES	C

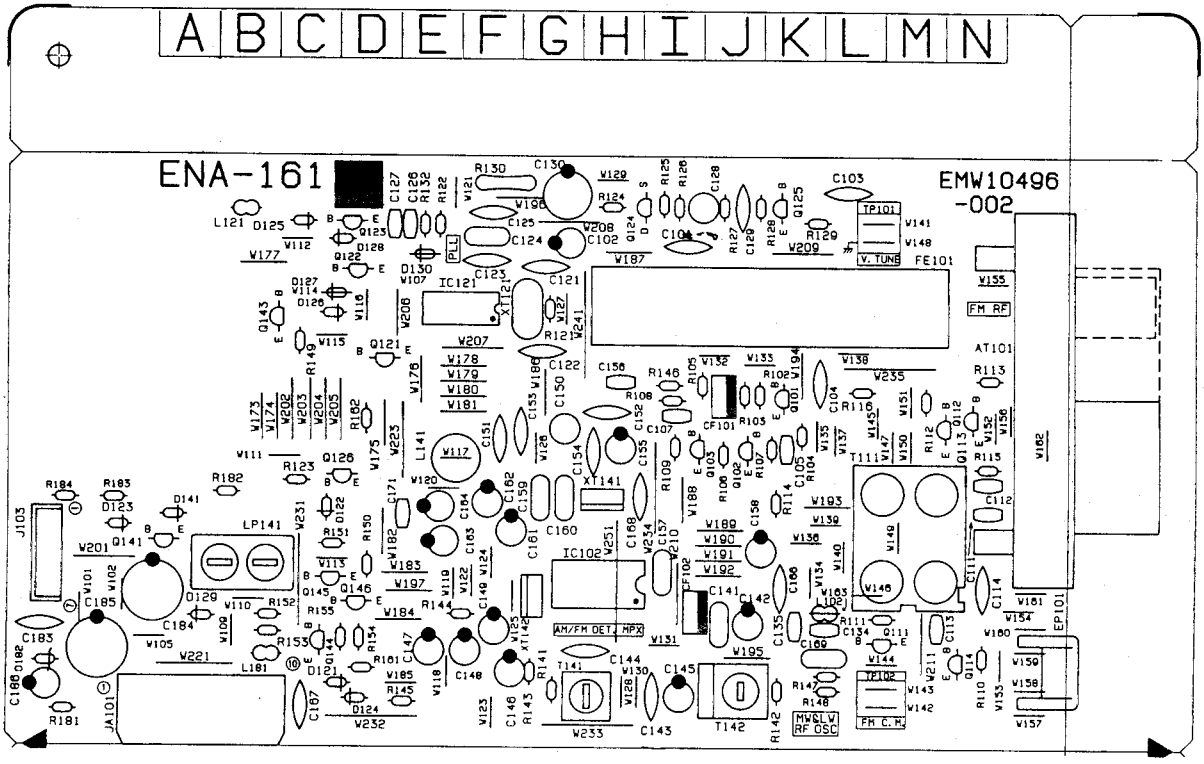
RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R724	QRD161J-303Y	30K 1/6W CARBON RES	J
	R725	QRD161J-133Y	13K 1/6W CARBON RES	
	R726	QRD167J-562	5.6K 1/6W CARBON RES	
	R727	QRD161J-183	18K 1/6W CARBON RES	
	R728	QRD161J-221	220 1/6W CARBON RES	C
	R728	QRD161J-221	220 1/6W CARBON RES	J
	R730	QRD161J-363	36K 1/6W CARBON RES	
	R731	QRD167J-153	15K 1/6W CARBON RES	
	R732	QRD167J-153	15K 1/6W CARBON RES	
	R733	QRD161J-303Y	30K 1/6W CARBON RES	
	R736	QRD161J-363	36K 1/6W CARBON RES	
	R738	QRD161J-363	36K 1/6W CARBON RES	
	R739	QRD167J-751	750 1/6W CARBON RES	
	R740	QRD161J-102	1K 1/6W CARBON RES	
	R741	QRD161J-102	1K 1/6W CARBON RES	
	R743	QRD161J-102	1K 1/6W CARBON RES	
	R744	QRD161J-102	1K 1/6W CARBON RES	
	R745	QRD161J-102	1K 1/6W CARBON RES	
	R746	QRD161J-102	1K 1/6W CARBON RES	
	R751	QRD161J-101	100 1/6W CARBON RES	
	R752	QRD161J-102	1K 1/6W CARBON RES	
	R753	QRD167J-560	56 1/6W CARBON RES	
	R755	QRD161J-271	270 1/6W CARBON RES	
	R756	QRD161J-101	100 1/6W CARBON RES	
	R758	QRD161J-271	270 1/6W CARBON RES	C
	R758	QRD161J-271	270 1/6W CARBON RES	J
	R760	QRD161J-303Y	30K 1/6W CARBON RES	
	R761	QRD161J-303Y	30K 1/6W CARBON RES	
	R762	QRD161J-473	47K 1/6W CARBON RES	
	R763	QRD161J-473	47K 1/6W CARBON RES	
	R764	QRD161J-303Y	30K 1/6W CARBON RES	
	R765	QRD161J-303Y	30K 1/6W CARBON RES	
	R766	QRD161J-473	47K 1/6W CARBON RES	
	R767	QRD161J-473	47K 1/6W CARBON RES	
	R768	QRD161J-302	3K 1/6W CARBON RES	
	R769	QRD161J-302	3K 1/6W CARBON RES	
	R770	QRD167J-332	3.3K 1/6W CARBON RES	
	R771	QRD167J-332	3.3K 1/6W CARBON RES	
	R772	QRD167J-332	3.3K 1/6W CARBON RES	
	R773	QRD167J-332	3.3K 1/6W CARBON RES	
	R774	QRD161J-333	33K 1/6W CARBON RES	
	R775	QRD161J-333	33K 1/6W CARBON RES	
	R776	QRD161J-222	2.2K 1/6W CARBON RES	
	R777	QRD161J-222	2.2K 1/6W CARBON RES	
	R778	QRD161J-273	27K 1/6W CARBON RES	
	R779	QRD161J-273	27K 1/6W CARBON RES	
	R780	QRD161J-561	560 1/6W CARBON RES	
	R781	QRD161J-561	560 1/6W CARBON RES	
	R786	QRD161J-271	270 1/6W CARBON RES	
	R787	QRD161J-271	270 1/6W CARBON RES	

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10499-002A	CIR.BOARD	
	K751	ENZ8101-007	INDUCTOR	
	P602	VMC0314-S12	CONNECT TER	
	P603	EMV7144-015R	CONNECT TER	
	BC604	EWS266-A408J	FLAT WIRE A	
	FS720	E3400-431	FELT SPACER	C
	FS720	E3400-431	FELT SPACER	J
	JA601	EMV7123-034	CONNECT TER	
	XT751	ECX0169-344KL	CRYSTAL	

■ ENA-161 Ⓐ Tuner PC Board Ass'y



TRANSISTORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q101	2SC461	SI.TRANSIST	
	Q102	2SC535	SI.TRANSIST HITACHI	
	Q103	2SC461	SI.TRANSIST	
	Q121	DTA144ES	DIGITAL TRA ROHM	
	Q122	DTA144ES	DIGITAL TRA ROHM	
	Q124	2SK301(P,Q)	F.E.T.	
	Q125	2SC458(C,D)	SI.TRANSIST HITACHI	
	Q126	DTC114ES	DIGITAL TRA ROHM	
	Q141	DTC114ES	DIGITAL TRA ROHM	
	Q143	DTC114ES	DIGITAL TRA ROHM	

I. C. S.

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC102	LA1836M	I.C(MONO-AN SANYO	
	IC121	LC7218JMX	I.C(DIGI-MO SANYO	

DIODES

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	D121	1SS133	SI.DIODE ROHM	
	D122	1SS133	SI.DIODE ROHM	
	D123	1SS133	SI.DIODE ROHM	
	D124	1SS133	SI.DIODE ROHM	
	D126	1SS133	SI.DIODE ROHM	
	D129	1SS133	SI.DIODE ROHM	
	D130	1SS133	SI.DIODE ROHM	
	D141	1SS133	SI.DIODE ROHM	
	D182	MTZ5.1JC	ZENER DIODE ROHM	

CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	C101	QCF21HP-103A	0.01MF 50V CER.CAPACI	
	C103	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C104	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C105	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C107	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C111	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C112	QCT30CH-120Y	12PF 50V CER.CAPACI	
	C114	QCC21EM-473	0.047MF 25V CER.CAPACI	
	C121	QCS21HJ-180A	18PF 50V CER.CAPACI	
	C122	QCS21HJ-180A	18PF 50V CER.CAPACI	

CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	C123	QCC21EM-473	0.047MF 25V CER.CAPACI	
	C124	QCZ0202-155	1.5MF 25V CER.RESIST	
	C125	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C126	QCBB1HK-101Y	100PF 50V CER.CAPACI	
	C127	QCBB1HK-101Y	100PF 50V CER.CAPACI	
	C128	QENB1HM-474	0.47MF 50V NP E.CAPAC	
	C129	QCY31HK-102Z	1000PF 50V CER.CAPACI	
	C130	QETB1CM-227	220MF 16V AL E.CAPAC	
	C141	QFLB1HJ-473	0.047MF 50V MYLAR CAPA	
	C142	QETB1HM-106	10MF 50V E.CAPACITO	
	C143	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C144	QCC21EM-473	0.047MF 25V CER.CAPACI	
	C145	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C146	QETB1HM-106	10MF 50V E.CAPACITO	
	C147	QETB1HM-105	1MF 50V AL E.CAPAC	
	C148	QETB1HM-474	0.47MF 50V ELECTRO	
	C149	QETB1HM-105	1MF 50V AL E.CAPAC	
	C150	QETC1HM-225ZN	2.2MF 50V AL E.CAPAC	
	C153	QCY31HK-102Z	1000PF 50V CER.CAPACI	C
	C153	QCY31HK-102Z	1000PF 50V CER.CAPACI	J
	C154	QCY31HK-472Z	4700PF 50V CER.CAPACI	
	C155	QETB1EM-476	47MF 25V AL E.CAPAC	
	C156	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C157	QCZ0202-155	1.5MF 25V CER.RESIST	
	C158	QETB1HM-106	10MF 50V E.CAPACITO	
	C159	QFLB1HJ-333	0.033MF 50V MYLAR CAPA	C
	C159	QFLB1HJ-333	0.033MF 50V MYLAR CAPA	J
	C160	QFLB1HJ-333	0.033MF 50V MYLAR CAPA	C
	C160	QFLB1HJ-333	0.033MF 50V MYLAR CAPA	J
	C161	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C162	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C163	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C164	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C166	QCC21EM-473	0.047MF 25V CER.CAPACI	
	C168	QCC21EM-473	0.047MF 25V CER.CAPACI	
	C169	QFV81HJ-274	0.27MF 50V T.FILM CAP	
	C171	QCBB1HK-102Y	1000PF 50V CER.CAPACI	
	C183	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C184	QETB1CM-227	220MF 16V AL E.CAPAC	
	C185	QETB1CM-477M	470MF 16V E.CAPACITO	
	C186	QETB1HM-475E	4.7MF 50V E.CAPACITO	

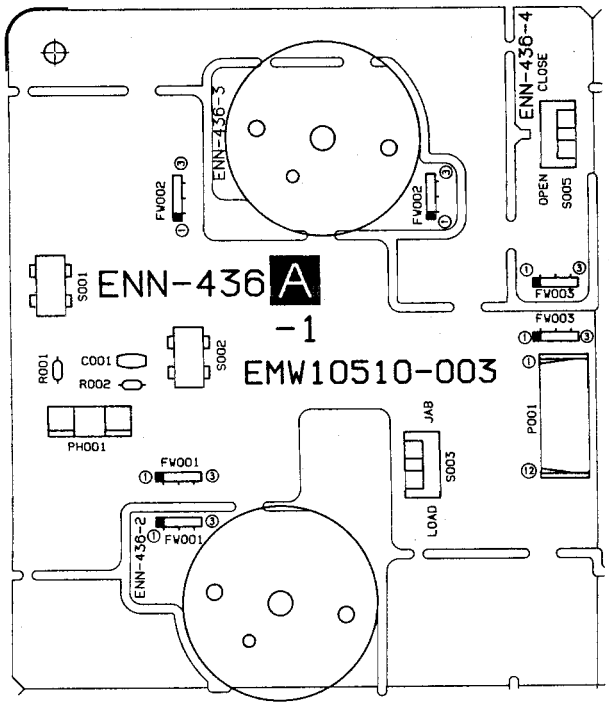
RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R102	QRD167J-332	3.3K	1/6W	CARBON RES	
	R103	QRD161J-221	220	1/6W	CARBON RES	
	R104	QRD167J-272	2.7K	1/6W	CARBON RES	
	R105	QRD161J-391	390	1/6W	CARBON RES	
	R106	QRD161J-102	1K	1/6W	CARBON RES	
	R107	QRD161J-681	680	1/6W	CARBON RES	
	R108	QRD167J-332	3.3K	1/6W	CARBON RES	
	R109	QRD161J-221	220	1/6W	CARBON RES	
	R114	QRD161J-103	10K	1/6W	CARBON RES	
	R115	QRD161J-104	100K	1/6W	CARBON RES	
	R116	QRD161J-222	2.2K	1/6W	CARBON RES	
	R121	QRD161J-473	47K	1/6W	CARBON RES	
	R122	QRD161J-472	4.7K	1/6W	CARBON RES	
	R123	QRD167J-562	5.6K	1/6W	CARBON RES	
	R124	QRD161J-222	2.2K	1/6W	CARBON RES	
	R125	QRD161J-222	2.2K	1/6W	CARBON RES	
	R126	QRD161J-181	180	1/6W	CARBON RES	
	R127	QRD167J-822	8.2K	1/6W	CARBON RES	
	R128	QRD161J-472	4.7K	1/6W	CARBON RES	
	R129	QRD161J-222	2.2K	1/6W	CARBON RES	
⚠	R130	QRD14CJ-680SX	68	1/4W	UNF.CARBON	C
⚠	R130	QRD14CJ-680SX	68	1/4W	UNF.CARBON	J
	R132	QRD161J-102	1K	1/6W	CARBON RES	
	R141	QRD161J-392	3.9K	1/6W	CARBON RES	
	R142	QRD161J-103	10K	1/6W	CARBON RES	
	R143	QRD161J-103	10K	1/6W	CARBON RES	
	R144	QRD167J-332	3.3K	1/6W	CARBON RES	
	R145	QRD161J-103	10K	1/6W	CARBON RES	
	R146	QRD161J-222	2.2K	1/6W	CARBON RES	C
	R146	QRD161J-222	2.2K	1/6W	CARBON RES	J
	R147	QRD167J-223	22K	1/6W	CARBON RES	C
	R147	QRD167J-223	22K	1/6W	CARBON RES	J
	R148	QRD161J-561	560	1/6W	CARBON RES	
	R149	QRD167J-223	22K	1/6W	CARBON RES	C
	R149	QRD167J-223	22K	1/6W	CARBON RES	J
	R150	QRD167J-332	3.3K	1/6W	CARBON RES	
	R151	QRD167J-332	3.3K	1/6W	CARBON RES	
	R152	QRD167J-332	3.3K	1/6W	CARBON RES	C
	R152	QRD167J-332	3.3K	1/6W	CARBON RES	J
	R153	QRD167J-332	3.3K	1/6W	CARBON RES	C
	R153	QRD167J-332	3.3K	1/6W	CARBON RES	J
	R161	QRD161J-473	47K	1/6W	CARBON RES	
	R162	QRD161J-222	2.2K	1/6W	CARBON RES	
	R181	QRD161J-222	2.2K	1/6W	CARBON RES	
	R182	QRD161J-103	10K	1/6W	CARBON RES	
	R183	QRD161J-103	10K	1/6W	CARBON RES	
	R184	QRD161J-473	47K	1/6W	CARBON RES	C
	R184	QRD161J-473	47K	1/6W	CARBON RES	J

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10496-002A	CIR.BOARD	C
		EMW10496-002A	CIR.BOARD	J
		E308963-001	SHIELD BRAC	
	J103	EMV5109-007A	MALE CONNEC	
	L121	EQL4004-1R0	INDUCTOR	
	L181	EQL4004-1R0	INDUCTOR	
	T111	EQR7121-004	RF COIL	C
	T111	EQR7121-004	RF COIL	J
	T141	EQT2140-021	I.F.TRANSFO	
	T142	ECB1560-010	CERAMIC FIL	
	AT101	EMB41YV-302K	ANTENNA TER	
	CF101	ECB2123-006R	CERAMIC FIL	C
	CF101	ECB2123-006R	CERAMIC FIL	J
	CF102	ECB2123-006R	CERAMIC FIL	C
	CF102	ECB2123-006R	CERAMIC FIL	J
	EP101	E70225-001	EARTH PLATE	
	FE101	EAF2203-004	FRONT END	C
	FE101	EAF2203-004	FRONT END	J
	JA101	EMV7140-L10R	PIN CONNECT	
	LP141	EQF0101-002	LOWPASS FIL	
	XT121	ECX0007-200KWJ1	CRYSTAL	
	XT141	ECXPR46-001A	CRYSTAL	
	XT142	ECB1001-002	CERAMIC FIL	

■ ENN-436 [A] CD Changer PC Board Ass'y



CAPACITORS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C001	QCHB1EZ-223	0.022MF 25V CER.CAPACI	

RESISTORS

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R001	QRD161J-331	330	1/6W	CARBON RES	
	R002	QRD161J-472	4.7K	1/6W	CARBON RES	

OTHERS

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10510-003A	CIR.BOARD	
	P001	EMV5132-012R	CONNECT TER	
	S001	QSEC001-E03	LEVER SWITC MAG. IN SW	
	S002	QSEC001-E03	LEVER SWITC HOM. POJ. SW	
	S003	ESS1200-002	LEVER SWITC LOAD/JAB SW	
	S005	ESS1200-002	LEVER SWITC OPEN/CLOSE SW	
	FW001	EWR33D-08SS	FLAT WIRE A	
	FW002	EWR33D-08SS	FLAT WIRE A	
	FW003	EWR33D-13SS	FLAT WIRE	
	PH001	GP1A53HR	I.C(PHOTO-I	

DX-C990S

<PARTS LIST>

* This parts list shows the defferences between DX-C990S and DX-C770.
When servicing, refer to the parts list of DX-C770 and "Packing Materials and Part Numbers". (See page 4-2~14 and 6-2).

Page	⚠	Item	Parts Name	DX-C770	DX-C990S	Q'ty	Area
4-3		1	FRONT PANEL ASSY	EFP-DXC770J(S)	EFP-DXC990SJ(S)	1	
4-3		1-1	FRONT PANEL	E102975-008SM	E102975-009SM	1	
4-4		65	REAR PANEL	E208431-026SM	E208431-028SM	1	C
4-4		65	REAR PANEL	E208431-027SM	E208431-029SM	1	J
4-10		R493	CARBON RESISTOR	6.8K	10K	1	
4-10		R494	CARBON RESISTOR	6.8K	10K	1	
4-10		R495	CARBON RESISTOR	5.6K	10K	1	
4-10		R496	CARBON RESISTOR	5.6K	10K	1	
-		R497	CARBON RESISTOR	BUS WIRE	QRD161J-332Y 3.3K	1	
-		R498	CARBON RESISTOR	BUS WIRE	QRD161J-332Y 3.3K	1	
4-10		C493	E.CAPACITOR	2.2/50	0.47TF	1	
4-10		C494	E.CAPACITOR	2.2/50	0.47TF	1	
4-10		C495	TF.CAPACITOR	NONE	0.47TF	1	
4-10		C496	TF.CAPACITOR	NONE	0.47TF	1	
6-2		1	PACKING CASE	E307437-124SM	E307437-125SM	1	

⚠:Safety Parts

The Marks for Dsignated Areas

J . . . the U.S.A. C . . . Canada No mark indicates all areas.

XT-C990S

< PARTS LIST >

Note : All printed circuit boards and its assemblies are not available as service parts.

This parts list shows the differences between XT-C990S and XT-C770.
When servicing, refer to the parts list of XT-C990S and XT-C550(See page 5-1~5-12).

Differences between **XT-C990S** and **XT-C770**.

Page	⚠	Item	Parts Name	XT-C990S	XT-C770	Q'ty	Area
5-3		42	REAR PANEL	E208404-017SM	E208404-014SM	1	C
5-3		42	REAR PANEL	E208404-015SM	E208404-013SM	1	J

The Marks for Designated Areas		
J .... the U,S,A,	C ..... Canada	No mark indicates all area.

Accessories List

Symbol No. M 6 M M

⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	E30580-2226A	INSTRUCTION BOOK	1		J
		E30580-2227A	INSTRUCTION BOOK	1		C
	2	E43486-519A	CAUTION SHEET	1		
	3	BT-20025M	WARRANTY CARD	1		C
		BT-51006-1	REGISTER CARD	1		J
	4	BT-20044G	SAFETY SHEET	1		J
	5	BT-20071B	SERVICE NETWORK	1		C
	6	QPGA025-03505	ENVELOPE	1		C
		QPGA025-03505B	ENVELOPE	1		J
	8	EWPZ01-005	CONNECTOR CORD ASSY	1		
	9	EQB4001-015	LOOP ANTENNA	1		
	10	E03614-004	FM FEEDER ANTENNA	1		
	11	EMZ2001-014	ADAPTOR PLUG	1		
	12	RSPRPA-2PSA	BATTERY	1		
	13	RM-SEC770U	WIRE-LESS REMOTE CONTROL	1		
	14	E26072-020	CD RACK	1		
	15	E309945-001	NUMBER LABEL	1		

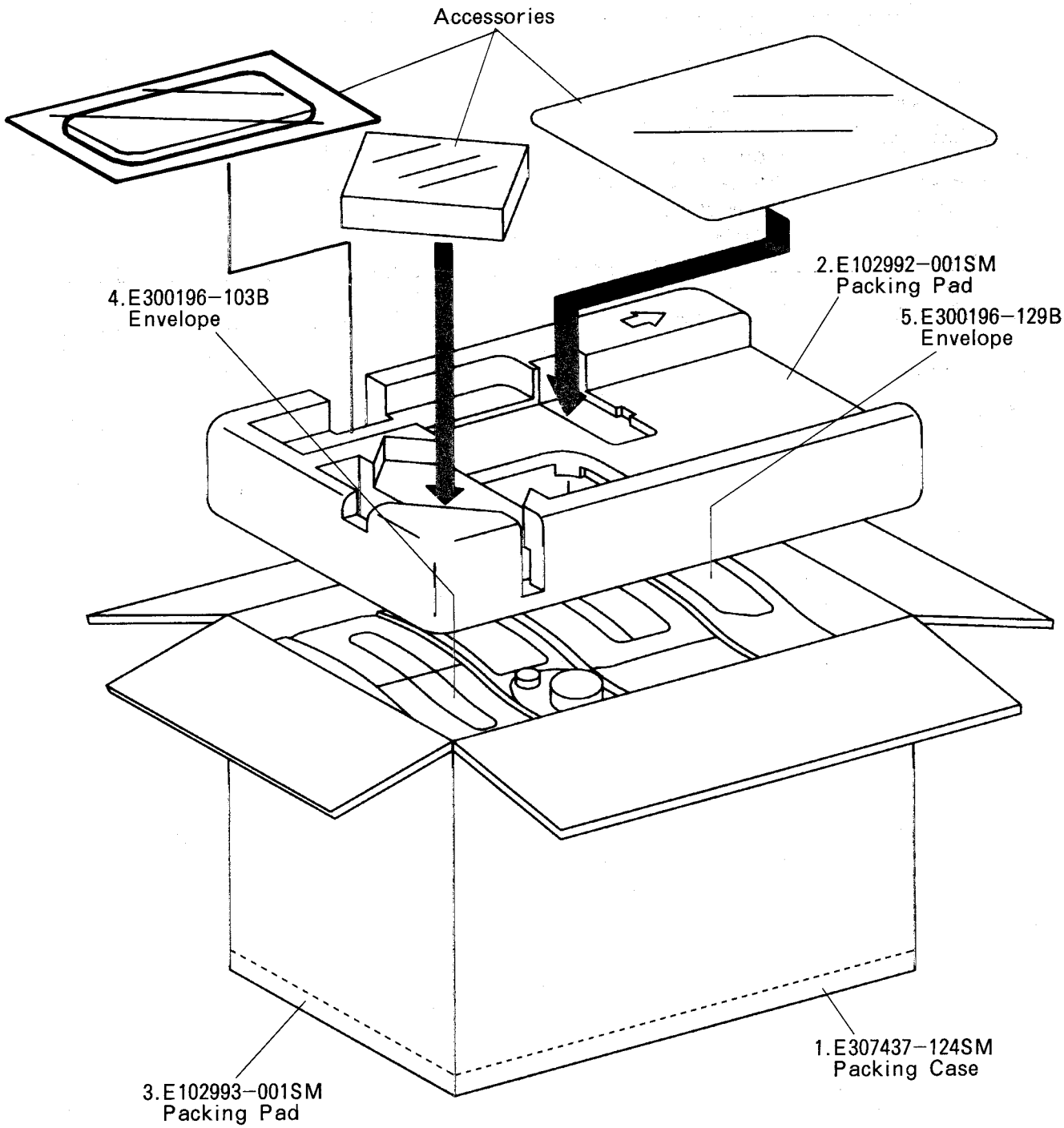
⚠ : Safety Parts

The Marks for Designated Areas

J ... the U.S.A. C .. Canada No mark indicates all area.

Packing Materials and Part Numbers

Symbol No. M 7 M M



The Marks for Dasignated Areas				
J	the U.S.A.	C	Canada	No mark indicates all area.

-MEMO-

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